

**Identification and Evaluation of Submerged Magnetic
Anomalies Deadmans Island Santa Rosa County,
Florida**

DACW01-03-T-0048

Submitted to:

**U. S. Army Corps of Engineers, Mobile District
P. O. Box 2288
Mobile, Alabama
36628-0001**

Submitted by:

**Tidewater Atlantic Research, Inc.
P. O. Box 2494
Washington, North Carolina 27889**

23 April 2004

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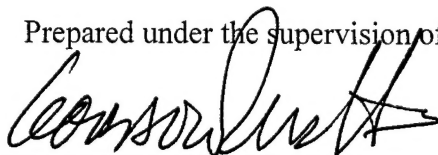
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Prepared under the supervision of



Gordon P. Watts Jr.
Principal Investigator

23 April 2004

Abstract

The U. S. Army Corps of Engineers, Mobile District [USACE-M] has proposed installing a shoreline protection system at Deadmans Island, Santa Rosa County, Florida. This work is to be comprised of the placement of a wall of vinyl sheetpile offshore of the island and the planting of vegetation on the island itself. Because of the archaeological sensitivity of the island, the USACE-M requested that an underwater remote sensing and terrestrial survey be carried out in the areas to be impacted by construction activities. That investigation was conducted by personnel from Panamerican Consultants, Inc. [PCI] in August 2002. The results of that research identified a total of 17 magnetic anomalies. Four of those anomalies were located in the sheetpile alignment and were recommended for further investigation. As a consequence of PCI's investigation, the USACE-M issued a request for additional investigation to identify and assess the four potentially significant anomalies to be impacted by the construction. That additional research was conducted by archaeologist from Tidewater Atlantic Research Inc. [TAR], of Washington, North Carolina. Field research was carried out between 23 and 24 August 2003. Assessment of the targets consisted of a systematic search of the bottom surface either by wading or diving with a hydraulic jet probe and/or induction dredge. The results of the investigation revealed that all four were generated by modern debris or material possibly associated with the marine railway or fertilizer plant established on Town Point during the late 19th and early 20th centuries. Anomalies 1 and 3 were identified as debris consisting rail road iron, pilings, wire rope and chain. Anomalies 9 and 13 were identified as coils of wire and structural material: dock structures and a barge. Besides the barge, all of the material appeared to be fragmentary and retained little of their original fabric. Probing in the vicinity of material generating the targets revealed no additional cultural material. No further investigation of the anomalies is recommended in conjunction with the current project.

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Introduction

The U. S. Army Corps of Engineers, Mobile District [USACE-M] has proposed installing a shoreline protection system at Deadmans Island, Santa Rosa County, Florida. This work is to be comprised of the placement of a wall of vinyl sheetpile offshore of the island and the planting of vegetation on the island itself. Because of the archaeological sensitivity of the island, the USACE-M requested that an underwater remote sensing and terrestrial survey be carried out in the areas to be impacted by construction activities. That investigation was conducted by personnel from Panamerican Consultants, Inc. [PCI] in August 2002. The results of that research identified a total of 17 magnetic anomalies. Four of those anomalies were located in the sheetpile alignment and were recommended for further investigation. A number of potentially significant features were observed on the surface during testing on the island. However, given the minimal impact of the proposed planting site investigators determined that project activities would serve to protect the resources rather than disturb them. As a consequence of PCI's investigation, the USACE-M issued a request for additional investigation to identify and assess the four potentially significant remote sensing anomalies to be impacted by the construction. That additional research was conducted by archaeologist from Tidewater Atlantic Research Inc. [TAR], of Washington, North Carolina.

The investigation conducted by TAR was designed to provide accurate and reliable identification, assessment and documentation of submerged cultural resources in the study area. The assessment methodology was developed to comply with the criteria of National Historic Preservation Act of 1966 (Public Law 89-665), the National Environmental Policy Act of 1969 (Public Law 11-190), Executive Order 11593, the Advisory Council on Historic Preservation Procedures for the protection of historic and cultural properties (36 CFR Part 800) and the updated guidelines described in 36 CFR 64 and 36 CFR 66. The results of the investigation were designed to furnish the USACE-M with the archaeological data required for complying with submerged cultural resource legislation and regulations.

The work performed consisted of a background literature review, proton precession magnetometer relocation survey and diver investigation. Field research was carried out between 23 and 24 August 2003. Assessment of the targets consisted of a systematic search of the bottom surface either by wading or diving with a hydraulic jet probe and/or induction dredge. The results of the investigation revealed that all four were generated by modern debris or material possibly associated with the marine railway or fertilizer plant established on Town Point during the late 19th and early 20th centuries. Anomalies 1 and 3 were identified as debris consisting rail road iron, pilings, wire rope and chain. Anomalies 9 and 13 were identified as coils of wire and structural material: dock structures and a barge. Besides the barge, all of the material appeared to be fragmentary and retained little original fabric. Probing in the vicinity of the targets also revealed no associated articulated remains. No further investigation of the anomalies is recommended in conjunction with the current project.

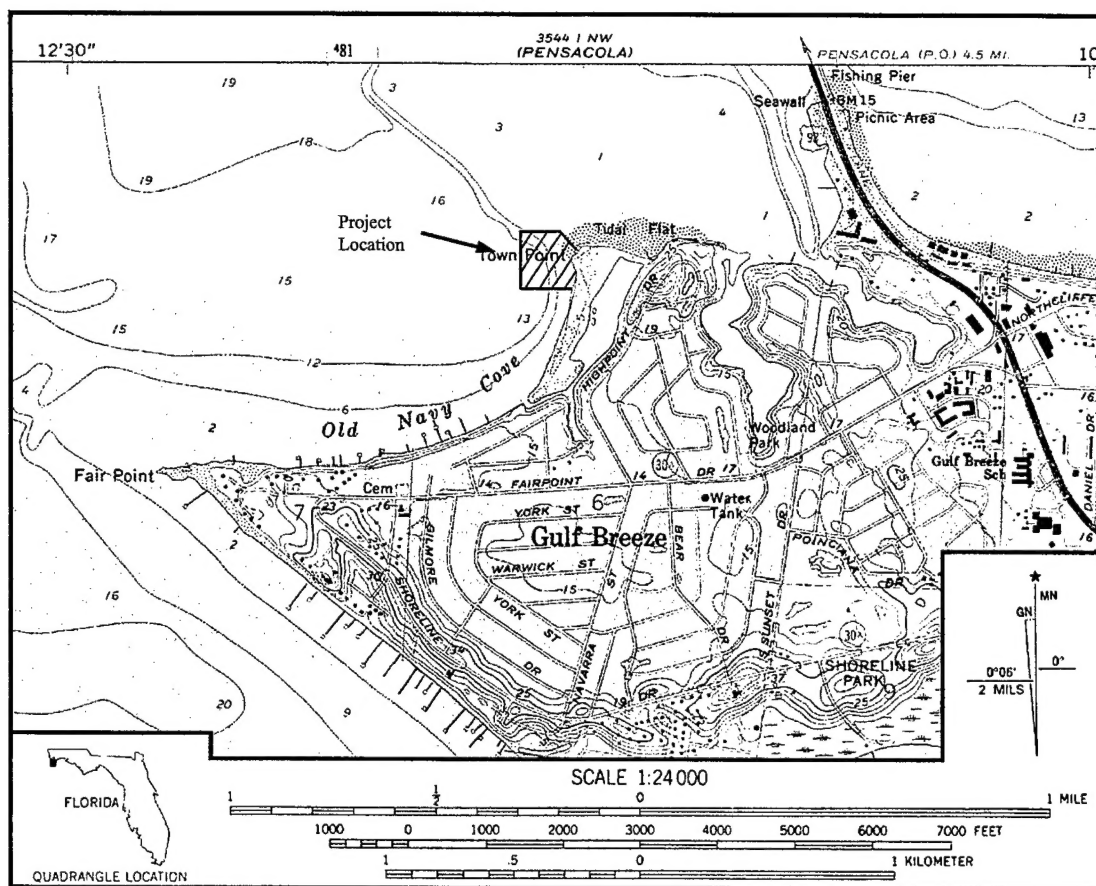


Figure 1. Project location map (USGS 7.5" Gulf Breeze, FLA, 1969, revised 1987, 1992).

Project personnel consisted of Dr. Gordon P. Watts, Jr., principal investigator, Raymond Tubby, Dave Whall and Mike Lavender, archaeologist and Colin Arnold, archaeological technician. Gordon Watts and Raymond Tubby prepared the report for production.

Project Location

The project area is located off Town Point at the northwestern tip of Deadmans Island (Figure 1). The island is actually a small peninsula which lies at the northeastern end of Old Navy Cove in the City of Gulf Breeze on the western end of the Santa Rosa Peninsula. Water depth in the target areas ranged between 3 and 6 feet. The Florida State Plane, North Zone, NAD 83 coordinates for the investigated targets are:

Target	Easting	Northing
1	1120797	507363
3	1120794	507469
9	1120714	507725
13	1120834	507840

Research Methodology

Literature and Historical Research

TAR personnel conducted a brief literature search of primary and secondary sources to assess the potential for finding significant historic and/or cultural resources at the proposed project site. Preliminary wreck specific information was collected from such secondary sources as: *The Encyclopedia of American Shipwrecks* (Berman 1972); *Merchant Steam Vessels of the United States 1790 - 1868* (Lytle and Holdcamper 1975); *Shipwrecks of the Civil War: The Encyclopedia of Union and Confederate Naval Losses* (Shomette 1973); *Shipwrecks in the Americas* (Marx 1983); *Shipwrecks of Florida* (Singer 1998) and other published materials. Additional information was also generated by a survey of selected Florida newspapers and the Wreck Information List of the U. S. Hydrographic Office.

TAR personnel reviewed the site files collected by PCI archaeologists for information on shipwreck and other archaeological data that could aid in identifying the material generating the remote sensing anomalies. TAR personnel also contacted and interviewed area archaeologists and other individuals knowledgeable in maritime history and shipwreck research to solicit their assistance in generating wreck data.

Target Identification and Assessment

The position of the targets selected for investigation were re-established using an EG&G GEOMETRICS proton precession magnetometer and a Trimble AG differential global positioning system (DGPS). At each target location, a buoy was deployed to provide a surface navigational reference and to identify the primary datum station used during the investigation of each target. Because of shoal conditions within the project area target assessment was conducted at low tide which allowed archaeologists to investigate most anomalies by wading. Those targets too deep to be examined by wading were investigated by tethered SCUBA-equipped divers.

At each target site, archaeologists further refined the anomaly location by wading/swimming a QUANTRO SENSING handheld underwater proton precession magnetometer in a circle search pattern around the buoy. All exposed material encountered was examined and identified by hand. Where the magnetometer indicated sub-bottom material, hydraulic jet probes and/or induction dredges were employed to delineate and determine the nature of the material generating the magnetic signature. Once each target had been located, it was investigated and positively identified so that an assessment of potential National Register of Historic Places eligibility could be made.

Historical Background

Historians are not sure which European explorer was the first to discover Pensacola and recognize its value (Dau 1934:36-37; Leonard 1939:1). Dau mentions at least four expeditions before that of Hernando De Soto. In 1539, one of De Soto's officers entered

Pensacola Bay, which he called "Achusi." He described it as a magnificent harbor sheltered from the winds with water deep enough that he was able to bring his ship close to land and disembark without casting open the hatch (Vega 1951:247-248). Despite this recommendation and the friendliness of the local Indians, De Soto bypassed the bay. Due to De Soto's death and failure of his venture, interest in the Pensacola area diminished. Ochuse Bay, as Pensacola was named by the Spanish, was occasionally visited by Spanish ships during the 16th century. As early as 1557, a "*royal cedula*" to the Viceroy in Mexico recommended establishing a settlement at Pensacola bay (Tebeau 1971:25).

In October 1558, a Caribbean Viceroy directed Tristan de Luna y Arellano to lead an expedition to Florida. De Luna decided to make his base on Ochuse Bay. He arrived in August 1559 with more than 500 soldiers, 1,000 civilians, horses, food, tools, weapons and even breeding stock. Thirteen vessels had been commandeered to transport his impressive colonial expedition. When he arrived in Ochuse Bay, de Luna was extremely impressed with the harbor:

It is one of the best ports to be found in the discovered part of the Indies; the lowest water it has at the entrance is eleven cubits, and inside it has from seven to eight fathoms. It is a very spacious port and has a width of three leagues fronting the [entrance]. (Priestley 1928, II:211-213, 275).

At Ochuse Bay, de Luna also mentioned observing Indians living in grass huts, but they proved to be friendly.

Less than a week after sailing into the bay, disaster struck. On 19 August, a severe storm, probably a hurricane, struck the bay. When the winds subsided 24 hours later, de Luna's fleet was virtually destroyed. Of the original fleet of 13, only two barks and one caravel remained seaworthy. To complicate matters, most rations, along with other supplies had been lost (Priestley 1928, II:57-61). Although de Luna survived the hurricane and established a modest settlement at Pensacola, it would endure less than three years. Inadequately supported by Spain and with little or no food available from native sources, the colonists became demoralized. In 1561, de Luna was replaced and the settlers persevered only a few more months before giving up and sailing for Cuba. Permanent settlement of Pensacola would not occur until the late 17th century.

French expansion in North America and the Caribbean would ironically lead to Spanish colonization of Pensacola. From initial settlements along the St. Lawrence River in Canada, the French began expanding through the Great Lakes, down the Mississippi River to the Gulf of Mexico. In 1682, Sieur de La Salle laid claim to the mouth of the Mississippi for France and proposed to colonize the area. Although his effort failed tragically, it did lead to renewed Spanish interest in Pensacola. In 1689, Captain Andres de Paz, on a voyage along the Gulf Coast in search of French presence, urged that Pensacola be colonized and fortified. In his report, he quoted a pilot saying that Pensacola Bay was "the best bay I have ever seen in my life" (Tebeau 1971:60). Interest in colonization, expressed by the King and others led, in the decade that followed, to additional expeditions and reconnaissance surveys. It was another French threat that finally led to the decision to establish a colony there. On 22 January 1699, less than three

months after a Spanish expedition arrived and began laying out a settlement and fort, Pierre le Moyne d' Iberville with five ships carrying more than 200 men, anchored in Pensacola Bay. Noting the Spanish presence, the French sailed eastward and ultimately settled at Biloxi.

Louisiana, as the new French colony was named, would spread westward to Texas, northward to French Canada and eastward beyond Mobile Bay and the Alabama River. Although the French would found Mobile in 1711 and New Orleans in 1718, they continued to recognize that Pensacola Bay was the preeminent site on the Gulf (Hamilton 1910:48; Tebeau 1971:61; Griffen 1959:242). For almost 50 years, cooperation in differing degrees, particularly economic, existed between the settlements of Pensacola and Mobile. The major reason for this cooperation was the family alliance associated with the coming to power in Spain of a member of the Bourbon ruling family of France.

The isolated Spanish garrison at Pensacola was established for defensive reasons. A small wooden fort called San Carlos was erected on the mainland at the entrance to the wide bay. The fort was vulnerable as it was in a constant state of disrepair and poorly located. Although the garrison's commander recommended that the fort be moved across the entrance to Santa Rosa Island, this was not done for many years (Griffen 1959:245). Jurisdiction of the Pensacola fort was placed under the control of the Viceroy of New Spain (Mexico). New Spain was to provide the necessary supplies for the garrison. From the beginning, Spanish support was negligible, primarily because the government in New Spain considered the Pensacola site to be of little use and a drain on their funds. In fact, Spain's only significant economic return from the Pensacola colony was ship masts and timber for the Spanish Navy. The infrequent supply ships from New Spain usually returned with those cargoes (Griffen 1959:247).

Out of desperation, the Pensacola garrison turned to the French for help, particularly food. In 1704, the French supplied Pensacola with 4,000 pounds of flour (Surrey 1916:418). In the following years, the French sold the Spanish garrison not only flour and other foodstuffs, but also dry goods and even weapons (Surrey 1916:419-421). The various governors in French Louisiana attempted to curtail this trade, but were unsuccessful until 1718. When war broke out between France and Spain, the relationship between the two colonies became hostile. Shortly after news of the war reached the colonies, a force of French soldiers and Indian warriors marched overland to Pensacola Bay. With support from four warships, they seized control of Pensacola (Hamilton 1910:101). The French occupied the Spanish colony for four years. In 1723, the war ended and shortly thereafter the French abandoned their claim to Spanish Florida. The Spanish also resumed their illegal trade with French Mobile (Gold 1969:10; Surrey 1916:419-421).

In 1722, the Spanish began construction of a fort and settlement on Santa Rosa Island. Until 1752, when the settlement was destroyed by a hurricane, the Spanish concentrated their development at Santa Rosa. During the interim, in 1741, the Spanish commandant in Pensacola had received orders to stop all trade with the French and seize the vessels employed. That order, however, was ignored. The long history of neglect by Spanish

officials in New Spain persuaded the Pensacola garrison that it was essential to continue trade with the French, particularly in Mobile (Surrey 1916:426). After the 1752 hurricane destroyed the settlement on Santa Rosa Island, a new colony was built at the present site of Pensacola. In 1760, that settlement was also destroyed by a hurricane (Tebeau 1971:67; Gold 1969:10). Three years later, what remained of the settlement was turned over to the British as a result of a treaty signed between Great Britain and Spain.

In 1756, the Seven Years War broke out in Europe, involving a number of countries, including France and Great Britain. The war was known as the French and Indian War in North America. By 1760, hostilities engulfed Spain and her colonial empire. British forces captured Manila in the Philippines and Havana in Cuba. This establishment of British naval supremacy in the Caribbean persuaded Spain to cede Florida to Great Britain in return for Havana and Manila in the Treaty of Paris signed in 1763 (McGovern 1974:57).

Nearly all of the Spanish subjects in Florida abandoned their homes and migrated to other Spanish colonies. In September 1763, more than 600 people, including soldiers, convicts and Christianized Indians, left Pensacola on eight ships for Vera Cruz (Gold 1969:35, 100-101). The exodus had just started when the first British troops disembarked in early August. However, the British were slow to relieve the garrison and it was late autumn before the last Spanish soldiers left. The British were surprised at the mass exodus of the Spanish and their Indian allies. They were also generally critical of their new colony and its capital. One newly arrived official wrote that: "I may say with safety I am now in the worst part of the world, ...it is so damned hot fish stink before it can be boiled" (Starr 1976:132-133). On 7 October 1763, the British province of West Florida was created with Pensacola named as the provincial capital (Johnson 1959:263-264). The province or colony was bounded on the east by the Apalachicola River and on the west by the Mississippi River. The province included Mobile, but the mouth of the Mississippi and New Orleans came under Spanish control (Johnson 1943:6-7).

The entrance of the harbor was somewhat difficult for inexperienced pilots to navigate. The long island of Santa Rosa formed a breakwater across the mouth of the harbor scarcely four fathoms deep at the extreme western end. As a result, the channel twisted like the bend of the letter "S." Bayous and lagoons with sand-barred passes lay on either side of the bay. The bay was protected by a small square stockade fort with two guns located on Santa Rosa Island. The Spanish had maintained this small fortification as a signal rather than as an actual defensive position (Johnson 1943:266).

Major William Forbes, commander of the British troops, reported that: "the place which is called the Fort consists of about half a mile of ground in circumference surrounded with a rotten stockade without a ditch, so defenceless [sic] that anyone can step in at pleasure. The Barracks of the officers and soldiers are nothing more than miserable bark hutts [sic], without any sort of fire place or windows..." (Gold 1969:156). Because of the dilapidated condition of the living quarters, the British garrison lived outside the fort (McGovern 1974:58; Starr 1976:6).

West Florida developed very slowly under British rule. Despite its excellent harbor, Pensacola never became the center of trade that British merchants had desired. The selection of Pensacola as the seat of government was primarily because of its location in the southeastern tip of the colony and the potential for trade with Spanish colonies (Johnson 1943:132; Parks 1981:14). Commerce with the Spanish colonies utilizing British ships was legal from the standpoint of the English Navigation laws, but was prohibited under Spanish law. Few British merchants were willing to hazard their ships and merchandise to trade with the Spanish colonies. Those that did usually went to Mobile, New Orleans and the former French territories across the Mississippi River. Flour, pork, beef and Negro slaves were among the "materials" purchased in those ports (Howard 1947:17-18). A number of Spanish ships traded with Pensacola in the years immediately following British seizure, but that trade declined after 1770 (Johnson 1943:188). British naval vessels frequently turned back Spanish ships "which were said to be anxious to exchange Spanish dollars for English goods" (Johnson 1959:271; McGovern 1974:69).

The only exchange opportunity available with Great Britain was a single packet boat that ran between Pensacola, Jamaica and Charleston. Apparently no direct intercourse with Great Britain was possible (Wright 1975:9; McGovern 1974:70). "Hard money" was extremely scarce in West Florida because Pensacola had nothing of sufficient value or quantity except deer skins obtained from Indians to offer in exchange (Wright 1975:24). Soil on the Gulf coast near Pensacola was relatively sterile, and the British never exploited the local timber in the same manner as their Spanish predecessors.

The hostilities associated with the American War for Independence had a direct impact on Pensacola's development. In 1779, Spain declared war on Great Britain and Pensacola became the objective of military operations. Because of the combat going on in the colonies along the eastern seaboard and the fear of a French invasion of the British Isles, few British reinforcements were spared for the defense of Pensacola. West Florida was considered to be a backwater area. When General John Campbell was put in charge of the colony's defenses, he recognized that Pensacola would be the logical target for a Spanish raid and concentrated his meager force there (Parks 1981:20).

The first line of defense was to be at sea. The naval squadron stationed at Jamaica under Sir Peter Parker should have safeguarded the approaches to Pensacola, but its priorities lay elsewhere (McGovern 1974:77). In 1778, Parker deployed a small force along the Gulf Coast, including three 14-gun vessels. Those sloops were the *Hound*, *Stork* and *Sylph*. In early October 1778, a major cyclone struck the gulf with dire consequences for Parker's fleet. A witness later wrote: "the severest hurricane ever felt or known in this part of the world, since West Florida has belonged to the Crown of Great Britain, happened...with such irresistible fury and violence as entirely to sweep away all the wharfs, stores, and houses contiguous to the water side...All the ships and vessels in the harbor were either lost or driven ashore, except His Majesty's sloop of war *Sylph*" (Starr 1976:124). When war was declared the following year, the only warship in Pensacola was the *Sylph*, a "crazy, condemned, unserviceable sloop, that can never go out of the harbour" (Proctor 1978:60; Starr 1976:162).

In 1780, a convoy of four supply ships escorted by two sloops reached Pensacola from Jamaica. Two warships, the *Hound* and *Port Royal* were added to the port's defenses (Servies 1982:3). The *Earl of Bathurst*, an ordnance ship and armed merchantmen in the harbor were also taken over and anchored at the harbor's mouth (Proctor 1978:61-62). It was assumed that additional naval vessels would be sent to reinforce the defenses, but only one, the *Mentor*, a recently purchased, sloop-rigged ship carrying a battery of 24 guns, arrived in time (Servies 1982:12). *Mentor*, with two prizes in tow, arrived in May 1780. While awaiting the expected Spanish attack, British warships occasionally sailed out seeking prizes and provided shore parties to work on the harbor's defenses (Servies 1982:13-14).

A few weeks after Spain declared war on Great Britain, the governor of Louisiana, Bernardo de Galvez, received orders to conquer British possessions along the Gulf of Mexico (Parks 1981:26). Galvez first took possession of British settlements along the Mississippi River. He then captured Mobile. With Mobile as a base and reinforcements from Havana, he planned to immediately attack Pensacola (Johnson 1943:216). In March 1780, a Spanish fleet sailed to assist in the Pensacola campaign, but the planned attack failed to materialize. The Spanish naval commander was convinced that his ships could not silence the guns guarding Pensacola Bay (Starr 1976:176). A second expedition in the fall stalled when the fleet carrying troops from Havana was hit by a hurricane (Parks 1981:27).

On the last day of February 1781, Galvez left Havana with some 7,000 men and a fleet numbering 38 vessels (Servies 1982:21). Ten days later, the fleet arrived off Pensacola and the troops were landed despite strong opposition from two British sloops, *Mentor* and *Port Royal* (Starr 1976:196; Rush 1966:passim). Nine days after the Galvez force arrived, his ships entered Pensacola Bay forcing the British ships to retreat. Pensacola was placed under siege until 8 May when a powder magazine exploded. The following day, the town and the garrison surrendered (Servies 1982:24; Parks 1981:27). According to one recent historian, Pensacola fell because of inadequate support. With even a few "ships of war" in Pensacola Bay, it is unlikely that the Spanish could have forced an entrance (Starr 1976:215). It was the presence of the Spanish fleet in the harbor that made British defeat inevitable.

In 1783, the international conflict came to an end. The treaties that ended the war returned Florida to Spain. As did the Spanish 18 years previously, British settlers in Pensacola chose to retire rather than remain under Spanish control. In this the "Second Spanish period," Pensacola became once again primarily a military garrison and trading post. One historian wrote:

The town itself preserved the physical appearance it had acquired during British Domination. It occupied a territory of about a mile along the bayfront and extending inland a quarter of a mile. On the north it was bounded by a swamp and on either side it was pinched out by two small streams which rose under Gage Hill. During the British occupation it had been laid out in blocks some 400 by 250 feet, each of which was divided into twelve lots. Few of these were built on. The streets defining the lots ran north-south and east-west and were

approximately ninety and sixty feet in width respectively. They were all unpaved...The houses, some two hundred in number, were all built of wood and most of them were of one story with porches facing the street. ...In the center of the town was a large plaza, same thirty acres in area, facing the bay. In the middle of the plaza was a stockade of cypress stakes some ten feet high. This was flanked by stronghouses [sic] of pine planks on each corner which were joined to the stockade. Within the enclosure the principal buildings were the house of the governor, the barracks for the garrison, and several storehouses (McGovern 1974:92-93).

Other than the small garrison of soldiers (reduced to 460 after 1783), there were less than 300 residents in the town (Wright 1975:92-93; Tebeau 1971:99). The number of residents would fluctuate during the Second Spanish period but rose to more than a thousand by 1805. At the time of West Florida's transfer to the United States, there were fewer than 700 inhabitants (McGovern 1974:97).

Spain's traditional mercantile policy officially excluded all foreign participation in colonial trade, but because of Indian preference for British goods and more importantly because Spain was unable to supply the needed merchandise, Spanish officials in Pensacola permitted British merchants to enter the trade (McAlister 1957:295-296). Even the Spanish government was unusually lenient with West Florida, as that colony enjoyed a form of free trade not generally found in the other Spanish colonies. A *royal cedula* even permitted Pensacola to trade with French settlements in the West Indies and Louisiana (Clark 1970:224-225; McGovern 1974:103).

Scotsmen William Panton, John Leslie and Thomas Forbes were principal merchants in Pensacola during these years. They were responsible for a steady flow of English goods to the Indians usually by way of Pensacola. Deer skins and meat were the most important commodities received from the Indians. In fact, Pensacola would become an important meat distribution center for the entire Gulf region (McAlister 1957:301; Cox 1967:149). Although other trade items such as timber and naval stores were available, they were generally ignored. There was also no interest in agriculture, and fishing was only for local consumption.

In 1804, Thomas Forbes wrote a letter to the Spanish ambassador in the United States enthusiastically describing the economic potential of Pensacola and the importance of the harbor. He recommended a more liberal trade policy for West Florida with extremely low duties on foreign goods. Forbes' suggestions were ignored, and it is doubtful that such a change in Spanish trade policy would have significantly improved Pensacola's situation (Coker 1979:11, 19-34; Peters 1979:37). One historian remarked: "Pensacola did not prosper under the Spaniards ...It was obvious to anyone who took the trouble to examine the facts that Pensacola was not a paying proposition for Spain" (McGovern 1974:103-104).

In 1803, the United States purchased Louisiana from the French king. Spain vigorously objected to the transfer, but could do nothing about it. The Louisiana treaty made no reference to the status of Florida, but President Thomas Jefferson supported the view that

Louisiana included that portion of Florida between the Mississippi River to the west and the Perdido River to the east. In 1810, American expansionists led a revolt, captured the fort at Baton Rouge and declared the entire area to be a part of the United States. In 1812, President James Madison announced American possession of West Florida from the Mississippi to the Perdido. To further frustrate the Spanish, after the outbreak of the War of 1812 American military forces occupied nearby Mobile.

The War of 1812 created another crisis for Pensacola. Although Spain was officially neutral in the conflict, she was allied with Great Britain in the struggle against Napoleonic France. American occupation of the Mobile region, and British activities in Florida (including agitation of the Creek Indians) practically guaranteed an American invasion of the Pensacola region. Andrew Jackson, after assuming command of American forces in the Gulf region, considered the takeover of the whole of Florida his ultimate objective (McAlister 1957:315-316). As early as July 1812, a marine officer in New Orleans wrote: "We are anxiously waiting for orders to take Mobile and Pensacola," and added, "should the English get possission [sic] of the port of the latter place, we will not be able to dispossess them" (Dudley 1985:410). In August 1814, two British warships arrived in Pensacola Bay and landed marines to occupy the fortifications with Spanish cooperation. In November, Jackson attacked the town and forced the British to evacuate. American occupation, however, was brief. The threat of a British invasion at either Mobile or New Orleans forced Jackson to concentrate his forces in those places.

The war ended in 1815 with Pensacola still under Spanish control, but only for a brief period. Revolution had broken out amongst Spanish colonies in Latin America and Spain did not have the resources to hold on to these colonies and provide the troops to guard the frontier between Florida and the United States. Indian raids across the border into Georgia and Alabama prompted General Jackson to invade West Florida in 1818 and once again occupied Pensacola (McAlister 1957:321-322). In February 1819, the Adams-Onis Treaty was signed whereby Spain renounced all claims to West Florida and ceded East Florida to the United States.

In July 1821, General Jackson arrived in Pensacola and formally took possession of Florida. Pensacola was the only important Florida settlement along the Gulf at that time. Even so, Pensacola was not impressive. The buildings were in an advanced state of disrepair, the barracks were largely without windows or roofs, and Jackson found the government house unfit for use. It was merely a frame building propped up with logs. The streets were principally deep white sand with a few brick sidewalks. The 1820 Spanish census counted fewer than 800 residents the town and the number grew to approximately 1,000 by 1830 (Doherty 1959:338-339; Tebeau 1971:134; Martin 1974:165).

Edmund M. Blunt, editor of the *American Pilot*, stated in 1822 that there were only three points of destination on the Gulf Coast of the United States: New Orleans, Mobile and Pensacola (Owens 1969:276). Nevertheless, at that time, port facilities were nearly non-existent at Pensacola. Only one small wharf was useable and most shipping was

transferred by lighters. Within a few years, however, a 1,000-foot wharf was built (Doherty 1959:339, 343). Commerce initially was negligible but slowly increased. Pensacola had neither a spectacular boom in the cotton trade nor commercial rivalries to attract attention. For that reason, there has been a tendency to underestimate the development of Pensacola as a seaport during the territorial period (Thurston 1972:106-107).

Pensacola also lacked a major waterway draining the backcountry. This was a serious handicap to commercial growth (Martin 1974:167-168; Doherty 1959:345; Dibble 1974:9). A recent study, however, suggested that the absence of river connections may well have been an advantage. Pensacola's deep and sheltered harbor was free from the shoals and bars that hampered navigation of neighboring Apalachicola, St. Marks and Mobile. Massive amounts of silt were deposited each year by the rivers and this sediment frustrated navigation in those areas.

Neither is it accurate to say that the lack of river connections left Pensacola without a back country. The Escambia River, while not a major waterway, was nevertheless a useful connection with the cotton fields of Alabama. Moreover, the sheltered waters of Pensacola Bay, Santa Rosa Sound and Chocktawhatchee Bay gave access to the Yellow River, Alaqua Creek, and the Chocktawhatchee River, as well as a number of lesser streams. Thus, an area stretching nearly one hundred miles eastward and extending far into southern Alabama was accessible to Pensacola (Thurston 1972:107).

Nevertheless, Pensacola residents, well aware of their good harbor, believed that the lack of an important waterway was an obstacle to expanding their commerce. In 1835, the *Pensacola Gazette* wrote: "It now apparent that there was then (the port becoming U. S. property in 1821) no substantial basis for these speculations to rest upon - the only things that gave them the least plausibility was the unequalled advantages of our harbor. But experience soon showed that we lacked what was then more infinitely more important, a navigable river to connect us with the interior" (Martin 1974:168). To overcome these apparent limitations, plans were developed to dig canals and later construct railroads to link Pensacola with other ports and the interior. An inland waterway system would not become a reality until early in the 20th century and it would be after the Civil War before a viable railroad system was in use (Doherty 1959:345-349; Hildreth 1959:397-417; Pearce 1980:24).

The area comprising the current project area, known as the "Old Navy Cove," was used as a protected anchorage and careening station. The sheltered waters of the cove had been recognized and utilized by mariners as early as the First Spanish period. A map dating to 1742 clearly states the area was used for careening ships (Figure 2). By the time the United States took possession of Florida any facilities located in the area had all but disappeared. In 1821, *The Floridian* reported: "Opposite Pensacola, ..., there is a small cove called the Careening Ground, where vessels may lie close in shore Under

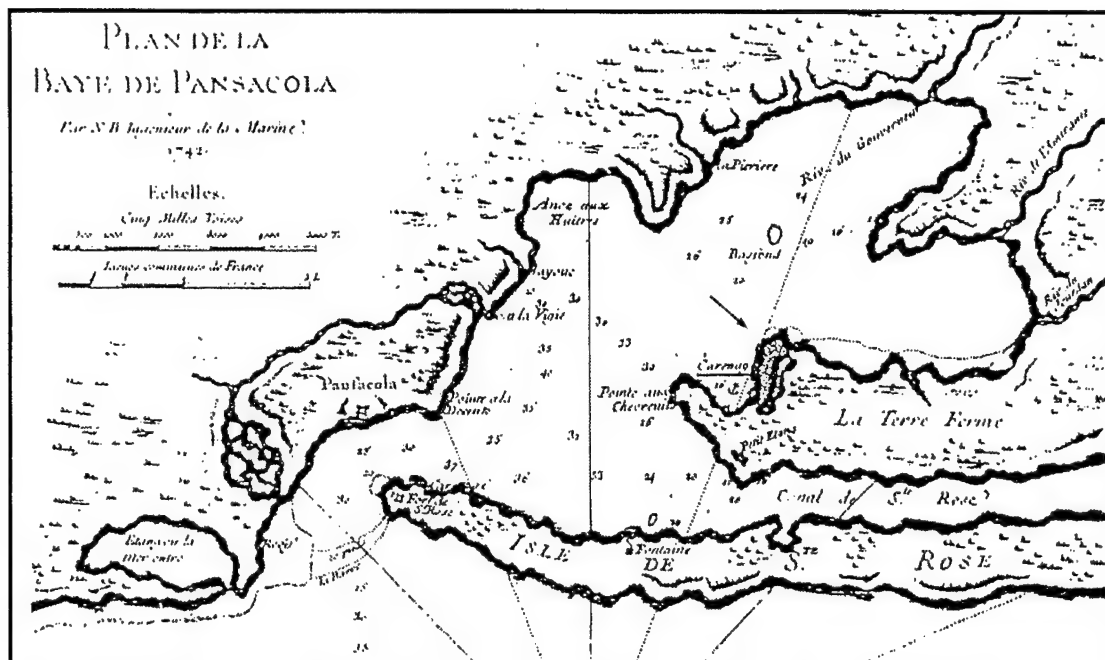


Figure 2. 1742 map of Pensacola Bay illustrating careening station at Deadmans Island (Tuttle and James 2003:10).

the British government, two wharves were constructed and at different times, vessels have been repaired, and even built and launched there. At present there are scarcely any remains of those works" (Tuttle and James 2003:9).

Pensacola's maritime trade during the territorial and antebellum periods was primarily coastwise and generally confined to the Gulf. In 1822, the steam schooner, *Fidelity*, offered regular service to and from New Orleans and another "packet" advertised service to the head of Escambia Bay. The packet service, however, was soon discontinued in favor of sailing schooners. Several merchants operated trading schooners to New Orleans, Mobile and the small Florida ports. In 1848, steam packet service to New Orleans was reintroduced and continued up to the outbreak of the Civil War. In the mid-thirties, mail steamers periodically stopped at Pensacola on their way to Mobile and New Orleans. The only foreign trade was an occasional schooner to Havana (Thurston 1972:108, 127-128). Barges, flatboats and rafts carried lumber and other products from around the bay and on other waterways including the Escambia River, the Conecuh River in Alabama and Holmes Valley in Florida (Thurston, 1972:109). In the 1830s, considerable lumber was carried in from the town of Blackwater (Milton) (Pearce 1980:37).

By far, the most important export was lumber. Florida was rich in live oak, pine and cedar. Due to confusion over Spanish, English and American sovereignty, much of the best timberland in Florida was in the public domain. One authority wrote that: "scarcely a fortnight passed without vessels sailing out of Pensacola loaded with timber stolen from public lands" (Wood 1981:49). Although Congress passed legislation in 1822 protecting the timber land in Florida, the law was unenforceable. Illicit timber cutting activities in

the vicinity of Pensacola ceased in the late 1820s partly because much of the timber was already cut and also because lawful timber was sufficient for the markets (Thurston 1972:50-51, 56).

Throughout the 19th and into the 20th century, lumber and lumber products such as staves and shingles dominated Pensacola's trade. "Of all the commercially significant communities along the Old South's Gulf Coast, Pensacola, Fla., was the most dependent upon lumber for its prosperity" (Eisterhold 1970:145). Bricks were also shipped, particularly to the West Indies, and in the 1840s, fruits and vegetables were transported to New Orleans. Very little cotton was shipped but because of its economic importance, Pensacola merchants optimistically hoped that in time it would surpass lumber in importance (Thurston 1972:109-112, 117, 120, 128).

One local merchant asserted that lumber was the town's "only staple." The streams running into Pensacola Bay made rafting from the interior possible as "logs could be brought to this bay with the greatest facility" (Eisterhold 1970:147-148). Lumber and lumber exports were shipped to Apalachicola, New Orleans, Baltimore, New York, Boston and other Gulf and South Atlantic ports. Although most of Pensacola's lumber was destined for domestic ports, a sizable amount was shipped to Nassau, Barcelona, Bremen and other ports in Europe and the Caribbean. Cuba was the primary international market destination (Eisterhold 1970:150).

Schooners were the most common vessel used in the lumber shipping business so far as coastwise trade was concerned. A typical schooner could carry about 100,000 square feet of lumber. Brigs, barks and ships were primarily used during the antebellum period to carry lumber to foreign ports. They could carry up to 500,000 square feet of lumber per voyage. In fact, of the 4,000 vessels that cleared Pensacola in the years preceding the Civil War, not a single schooner was listed as carrying lumber to a foreign port (Eisterhold 1970:151). At least one steamer, the *John Hunt*, joined the schooners in the coastwise lumber trade in the 1850s.

Between 1821-1858, 161,945,756 feet of lumber was shipped to ports throughout the United States from Pensacola. Cuba was still the premier international port in Pensacola's lumber trade, and New Orleans in coastwise trade. An undetermined amount of shingles, staves, barrels, wooden pails, pitch, tar and other naval stores were also shipped to these ports during the period (Eisterhold 1970:166).

Pensacola's harbor gave the city one significant advantage over the other Gulf towns. In February 1825, Congress passed a bill authorizing the establishment of a navy yard and depot at Pensacola (Pearce 1980:5). Captain William Bainbridge inspected the selected site and reported that: "The Bay of Pensacola is extensive and capacious, easy of access from the sea, and affording secure anchorage for any number of vessels of the largest class" (Eisterhold 1970:9). In 1826, plans were drawn up to construct a new fort on the western end of Santa Rosa Island for the defense of the entrance into the Bay.

The navy yard was established in 1830 with Captain Lewis Warrington as its first commander. Henceforth, the military would dominate the town's economy. "Throughout the Antebellum period," one authority wrote, "Pensacola hinged its hopes on communication and transportation facilities belatedly or never completed" (Dibble 1974:9). Unable to gain importance as an outlet for hinterland production or in coastal trade, it did not keep up with the economic growth of Mobile or Apalachicola in pre-Civil War years. Instead, Pensacola's economic revitalization in the late 1820s and the 1830s, depended greatly upon military construction and non-civilian population to foster its industrial and commercial growth and to establish cultural and social activities (Dibble 1974:9; Pearce 1980:33).

In 1836, a commission headed by Commodore Charles Stewart was established to inspect the Pensacola Navy Yard site. Stewart's report stressed the importance of the naval facility. "Nature seems to have formed [Pensacola harbor] ...for the great naval depot and rendezvous for our ships destined to protect the Mexican seas. The Gulf of Mexico is our Mediterranean, and Pensacola will become our Toulon" (Pearce 1980:26). He strongly recommended that the bar at the entrance into the bay be dredged to provide a deeper channel. In 1829, a United States Army Corps of Engineers [USACE] officer wrote that: "the bar, at the entrance of the harbor of Pensacola is the only impediment to its well-being as a naval depot" (Pearce 1980:30-31).

When the Mexican War broke out, the bar had not been dredged nor the yard completed. This may well have been the major reason why it did not become a major base of operations during that conflict (Doherty 1959:350). Ships of the blockading squadron needing substantial work could get only minor repairs at the Pensacola facility. Until the end of the conflict, Pensacola provisioned and repaired ships of the squadron blockading Mexican ports, but as one report stated: "[It] was not satisfactory even as a supply center. As a repair base it was useless" (Pearce 1980:51). In the early 1850s, the yard's repair facilities were improved with the addition of a floating dock, wet basin and railway. In 1857, political influence persuaded the United States Navy to build two sloops of war, the *Pensacola* and *Seminole* at the Pensacola yard. The vessels were launched in 1859 (Dibble 1974:83-91).

Two years later, the Civil War broke out and Florida seceded from the Union. During the first week of January 1861, rumors reached Pensacola that Florida state troops were planning to seize the forts, navy yard and other public property in the town (Bearss 1957:126). United States military personnel began to immediately evacuate provisions, guns and ammunition to Fort Pickens where it was believed Union forces could withstand an attack until relieved. On 12 January 1861, a military force of Alabama and Florida troops arrived and took over the navy yard. Southern troops continued to arrive without opposition from Union forces and within a few days they were in complete control of Pensacola (Pearce 1980:71-72). Union forces, however, continued entrenching themselves on Santa Rosa Island.

Early in 1861, Florida joined six other southern states and passed ordinances of secession from the United States. A convention of delegates from those states met in Montgomery, Alabama early in February. There they formed the Confederate States of America. By then, Pensacola was already under Confederate control.

Outside the harbor, the United States government was assembling a naval force. By the middle of March, it consisted of the *Wyandotte*, *Sabine*, *St. Louis* and *Brooklyn* (Bearss 1957:142). The citizens of Pensacola had continued providing supplies for the federal forces until mid March when they were stopped by Confederate military forces. On 13 May, the senior naval officer anchored off Pensacola (under orders from Washington) declared a blockade of the harbor. The declaration stated: "No coasting vessels will be permitted to enter or depart [Pensacola]" (Pearce 1980:73). From then on, Pensacola had to depend upon local resources and a limited amount of supplies coming in by overland transportation. On occasion, blockade-runners successfully evaded the Union warships and entered the port.

In September 1861, a Union force boarded and sank the blockade-runner *Judah* in Pensacola Bay. The following month, a sizable Confederate force landed on Santa Rosa Island but failed to take and destroy the fort's batteries. The Battle of Santa Rosa Island was the last attempt to force Union forces to evacuate Fort Pickens (Pearce 1980:75). A month later, Union batteries in the fort and warships anchored nearby bombarded the navy yard as well as forts McRee and Barrancas. The steamboat *Time* and the tug *Meaffie* were both damaged during the attack.

A final exchange of gunfire occurred early in January 1862. By March of that year Confederate forces had abandoned Pensacola. Machinery and other property were moved inland. In keeping with their scorched earth policy, guns, equipment and stores not moved along with two gunboats (under construction) at Milton were destroyed. In the navy yard, the steamer *Fulton*, three small steamers used as picket boats and other small boats were burned. In the town, an oil factory and two small steamers were also set ablaze. By early May, the evacuation and destruction of property was completed (Pearce 1980:78-79; Bearss 1961:350).

Although the yard was, according to Commander David Porter, "a ruin" when occupied by Union forces, it still offered "more facilities for repairs than could be found anywhere else [on the Gulf Coast]" (Pearce 1980:80). By September 1862, the yard was ready for service again. Throughout the remainder of the war, the warships of Admiral David Farragut's West Coast Blockading Squadron would use Pensacola as their base of operations and supply depot.

When hostilities ended, Pensacola's economy again went through a period of adjustment. The port's economic activity had significantly increased during the war, as a result of naval operations in the Gulf. Shortly after the war concluded, Pensacola was designated headquarters of the West Gulf Squadron. However, demobilization and retrenchment that has traditionally characterized U. S. military policy in post-conflict periods, resulted in neglect of the army and navy facilities in Pensacola. A report in 1870 implied that the

Navy yard "was almost useless. A ship could not even replenish its water supply there because the water in the yard's reservoir was unfit for drinking" (Pearce 1980:95). The yard's neglect would continue for many years. The *Pensacolean* observed in 1885 that "the yard looks...dead. A person can walk from the west to the north gate and not see a living soul save the nightwatchman" (Pearce 1980:103).

Fortunately, Pensacola's commerce revived quickly after the war. As before secession, the lumber industry was the mainstay of maritime shipping. Although timber had been exhausted in Pensacola's immediate vicinity, new mills were opened on Blackwater Bay, Perdido Bay and in Alabama. The lack of navigable waters led to the construction of short railroads to haul the lumber to the wharves. By 1875, over four million feet of lumber and lumber products were being shipped from Pensacola annually (Clubbs 1959:377). Over two million dollars worth of lumber were shipped annually to foreign ports from Pensacola, the remaining 15 percent going in coastal trading ships to New Orleans or the Atlantic ports. A large percentage of the vessels engaged in foreign trade arrived in Pensacola in ballast (Thurston 1972:214-215). The U. S. Army Corps of Engineers [USACE] reported that during the period 1875-1877, over 590 vessels entered the port "almost exclusively in the exportation of timber and lumber, principally to foreign countries" (USACE 1877:411). The lumber was carried in two and three-masted schooners in the same manner as before the war. Later barges, including some "cut-down" square-rigged ships, were employed in the trade (Bingham 1949:63-64).

Other commodities were also shipped, but the amount was negligible compared to lumber. In 1885, 5,337 bales of cotton, 1,290 tons of pig iron and miscellaneous merchandise, primarily agricultural, were exported. Coastwise imports of fertilizer, steel rails, ice, etc., exceeded two million dollars in that year (Clubbs 1959:377-381). During the last decade of the 19th century, coal destined for ports along the Gulf would become an increasingly important export. By 1891, fruit and coffee were being brought in from Central America (USACE 1891:1734).

Custom House records also illustrated the port's growth. By 1880, more than 400 vessels were entering the port annually. During 1887, more than 518 vessels offloaded or loaded freight there. Of that number, 361 were from foreign ports (Thurston 1972:169; Clubbs 1959:381). As early as 1885, the USACE reported "that the tonnage of sailing vessels entered [Pensacola]...exceeds that of any port of the Gulf and Atlantic coasts between Philadelphia and the Rio Grande, including Baltimore and New Orleans. It is the only deep-water port on the Gulf coast, vessels drawing over 20 feet can load alongside the wharves of the city..." (USACE 1885:1322).

Despite the growth in trade, steamer service continued to be erratic. Even with mail contracts, the value of passenger and freight traffic did not justify continuous service (Thurston 1972:174-175). The port remained isolated, until the last decade of the 19th century when railroads and liners brought adequate communications to the town (Thurston 1972:193, 196).

Pensacola did, however, develop the first commercial fishery in Florida after the Civil War. From 1870 until World War II, Pensacola dominated the red snapper industry. The port's landings of red snapper in 1890 were nearly 100 percent of the nation's entire catch (McNeil 1977:1). Although red snappers were caught before the Civil War, it was not until a local ice company shipped a cargo to New Orleans by rail that the fishery became commercially important. The fish became so popular that in 1888, the catch exceeded 3,200,000 pounds and grew to nearly five million pounds in 1896. Fishermen came from as far as Connecticut to work in the snapper fishery and because of the lack of sufficient ice in Mobile, virtually the entire Alabama fishing fleet joined the Pensacola fleet (Wilson 1981:16; Clubbs 1959:382; Thurston 1972:199-200; McNeil 1977:2). In 1895, the Pensacola snapper fishery employed 42 vessels of which 35 were locally owned. By 1912, the fishery contained 55 boats (McNeil 1977:14, 25). Oysters were the only other important commercial fishing product during these years, but the amount harvested and shipped out was modest. All the fish and oysters were shipped out of Pensacola by rail.

Railroads were a major factor in Pensacola's economic growth in the latter part of the 19th century. In 1872, Pensacola was connected by rail with the large population centers to the north (McNeil 1977:7). It was the Louisville and Nashville [L&N] railway that was most instrumental in promoting the port's transportation development. In 1877, the L&N acquired several lines in southern Alabama and west Florida, including the Pensacola Railroad. During the following decade, the railroad invested heavily in expansion in Florida, particularly Pensacola, appropriating a quarter of a million dollars in 1895 to build warehouses, wharves and a coaling depot. Thereafter, Pensacola became a terminal for L&N cars carrying coal. Barges carrying coal began to ply up and down the Gulf (Tebeau 1971:282-283; Jones 1916:244; Bingham 1949:63-64).

The combination of harbor improvements and an adequate rail system resulted in Pensacola finally becoming a major port. Regular trans-Atlantic steamer services were initiated in 1895. Exports nearly quadrupled in the next four years, rising from \$3,718,127 in 1895 to \$14,413,522 in 1899 (Thurston 1972:216). By the beginning of the 20th century, Pensacola, was no longer just a small sleepy town but "an outpost of a vast transoceanic frontier" (McGovern 1976:7). The city's emergence was a result of the significant growth in commerce that had occurred since the Civil War. "The entire economy of the city," McGovern wrote, "appeared to be tied to those wharves, railroad lines, warehouses, the custom house... and the business district on lower Palafox Street" (McGovern 1976:2).

The port's trade grew steadily from 1900 till the outbreak of the First World War. Exports in 1900 were 599,229 tons and the amount nearly doubled by WWI. In 1911, the USACE reported that "the commerce of this port is very large." The year before, the *Pensacola Journal* wrote that the port ranked first among Gulf ports in export of timber, naval stores and steel rails and third in cotton and bunker coal. Most of the foreign trade was in cotton bound for South America. The L&N operated two steamers out of

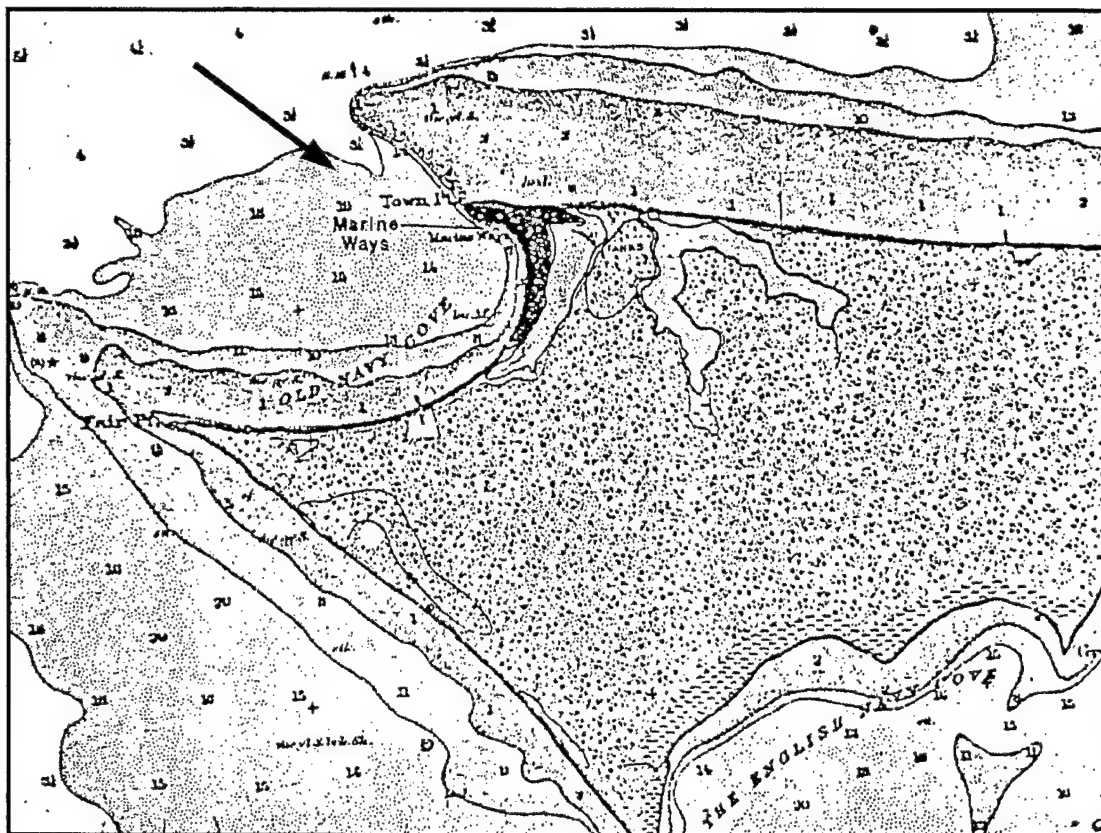


Figure 3. 1904 map of Pensacola Bay showing the location of the Pensacola Marine Railway on Deadmans Island (Tuttle and James 2003:12).

Pensacola for its own coal trade (McGovern 1976:20). The railroad was undoubtedly the most important factor in the port's growth after 1880, yet its dominance of Pensacola's trade hurt efforts to attract other shippers (McGovern 1976:20-21).

As Pensacola grew, there developed a need for repair facilities to support the increased shipping to the port. In 1889, the Pensacola Marine Railway Company constructed a marine railway at Town Point on Deadmans Island (Figure 3). Though originally intended for the repair of snapper boats the railways docking facility was designed to handle "a gross tonnage of 2000 lbs (sic 'tons?)" (as reported by researcher Debra Joy, Tuttle and James 2003:11). Prior to its destruction by a hurricane in 1906, the railway was the largest of its kind on the Gulf Coast. A fertilizer plant was later established at the site of the railway but financial hardships during the second decade of the 20th century caused that business to fold.

Pensacola's booming economy was temporarily checked by the deterioration of the lumber and naval stores trade. On 26 October 1906, a severe hurricane accompanied by heavy rain and storm surge struck Pensacola. The waterfront and naval base were severely damaged. Naval and commercial ships were sunk or driven ashore and the buildings and wharves along the waterfront were either destroyed or left barely salvageable (Pearce 1980:118; McGovern 1976:184). The lumber industry's demise

started early in the century because the pine timber was cut without replacement. Also, world market prices steadily declined in the period 1905-1912. Finally, a significant part of the foreign market obviously evaporated with the outbreak of WWI in 1914 (McGovern, 1976:22-23). The fishing industry also declined during these years. The 1906 and 1916 hurricanes followed by WWI virtually wiped out the city's fishing fleet (McNeil 1977:128; McGovern 1976:25). The depletion of red snapper and restrictions of offshore fishing because of the war were major factors in the fishery's decline (McGovern 1976:30; USACE 1918:851; Pearce 1980:148-162).

The one aspect of maritime activity that retained some normalcy during these years was coastwise commerce. Sailing vessels still carried lumber, coal and agricultural products to other Gulf ports. Two lines of small steamers, the Boca Grande Steamship Company and the Pensacola, St. Andrews, and Gulf Steamship Company, carried both cargo and passengers in and out of the port (Jones 1916:244-245).

Even the naval base which had continued operating after the Spanish American War on a reduced basis, closed down in 1911 (Pearce 1980:121-123). Fortunately, in 1913, the Secretary of the Navy chose Pensacola as the site for its "aeronautic center." By 1914, flight operations had commenced, frequently assisted by various naval vessels temporarily operating out of Pensacola. Within a decade, the Naval Air Station would become the mainstay of Pensacola's economy. America's ultimate entry into WWI in April 1917 stimulated the port's economy. Shipping picked up despite the German submarine threat. Lumber was needed for military construction throughout the country and abroad. The naval air facility expanded rapidly as scores of young men trained to receive their wings. The end of the war resulted in a recession nationwide, but as with the rest of the country, Pensacola's economy recovered in the early twenties.

That recovery, however, was limited. The port's tonnage exports in the 1920s were generally less than half those of the pre-war years (McGovern 1976:82). The lumber industry, after a brief resurgence during the war years, resumed a pattern of decline. The cotton market also deteriorated. Total commerce, reported in 1924, was 672,414 tons, approximately half foreign and half coastwise. Nearly all the foreign trade went to South American ports (USACE 1925:748-749). Competition from Mobile was another factor. Mobile had modernized its facilities and in so doing, improved its trade position, generally at Pensacola's expense. As a result of modernization and a number of other advantages, Mobile rapidly pulled ahead of Pensacola in maritime trade. As one historian noted, "it was an economic tragedy for Pensacola to be located in the Florida panhandle rather than Alabama" (McGovern 1976:84).

The city's commercial fishing industry still depended heavily upon red snapper. In the 1920s, refrigerated rail cars were first used to carry the fish to markets in New Orleans and several northeastern cities. Unfortunately, severe hurricanes in 1906, 1916 and 1926 badly hurt the industry. Each of the storms left Pensacola's wharves, docks and fishing boats destroyed or damaged (McNeil 1977:25; McGovern 1976:84, 86).

While Pensacola's traditional maritime industries were declining in the 1920s, the city's naval presence was expanding. The Naval Air Station became, as the *Pensacola Journal* noted in 1928, "The city's most important commercial asset." By 1925, the station employed a staff of 70 officers, 700 enlisted men and 500 civilian employees (Pearce 1980:168). Naval ships frequently anchored in Pensacola Harbor. The first aircraft carrier in the United States Navy, USS *Langley*, was based there from 1923-24. In the early 1920s, the obsolete battleship *Massachusetts* was sunk near Fort Pickens on the west side of the channel to prevent shoaling on the bar.

Pensacola's economy was not seriously affected by the Great Depression of the 1930s primarily because of the presence of the U. S. Navy. At the same time, however, maritime commerce continued to decline. "Annapolis of the Air" had become a more appropriate title for the city than "Deep Water Port" (McGovern 1976:136). In 1932, imports amounted to only 64,235 tons consisting principally of whale oil and chemicals and exports totaled 284,117 tons primarily lumber, naval stores, cotton and coal (USACE 1932:786-787).

WWII stimulated the city's economy as had WWI. Once again, the desperate need for trained pilots resulted in the Naval Air Station expansion. In February 1942, the Pensacola Shipyard and Engineering Company organized a shipbuilding facility near the city. At its peak, 7,000 shipyard workers were employed by the Pensacola Shipyard and Engineering Company. Although the yard failed within a year, a smaller shipbuilding facility replaced it during the war (McGovern 1976:157). There was virtually no export trade during the global conflict and petroleum products made up nearly all the imports. Petroleum products would continue to be the mainstay of the port's import trade after WWII. Also with the development of oil fields near Jay, Florida, some petroleum products were ultimately exported.

Ironically, in the postwar years, Pensacola, which had been one of the most important lumber shipping ports in the country, began to import lumber from tropical countries (Marcus and Fernald 1975:235). Tonnage shipped to the port in 1947 was 2,618,371, primarily fuel oil and gasoline (USACE 1954:34-35). It declined to under a million tons in 1948 and would average between 600 and 700 thousand tons for the following decade. Tonnage began to climb in the 1960s, averaging again over two million tons by 1975. One authority wrote in the mid-1970s that "the Port of Pensacola has become important for the coastwise shipment of liquid sulfur which is separated from the crude oil." More than 100,000 gallons of liquid sulfur was shipped weekly to Pascagoula, Mississippi (Marcus and Fernald 1975:238).

The fishing industry also went through a transformation after WWII. Landings of red snapper increased in the postwar years to 3.3 million pounds in 1952, but more boats, better equipment for locating the fish (depth finders, radio navigation, etc.) and the increasing destruction of young snappers by shrimp boats, depleted the stocks. The last snapper wholesaler in Pensacola went out of business in 1965 (McNeil 1977:2, 462). The rising popularity of shrimp provided a replacement resource for the finfish fishermen. In the postwar years, shrimping became an important industry in the Gulf region. In 1931,

only 72,525 pounds of shrimp were caught in Escambia County. Shrimpers at that time worked only the waters within 20 miles of Fort Pickens (Johnson & Lindner 1934:7, 10). After the war, however, the development of quick-freezing and other factors resulted in a significant expansion in commercial shrimping. In 1975, more than 17 million pounds of shrimp were caught by boats out of west Florida (U. S. Government Printing Office 1978:213). Recreation and sport fishing also became an important maritime industry in Pensacola during the last decades of the 20th century. Chartered fishing boats, sport fishermen and trailered boats have become an important aspect of Pensacola's economy as elsewhere along the coastal United States.

Contemporary Pensacola is both a deepwater and barge port. Its major exports are food products and liquid sulfur. Petroleum products are also imported. Tonnage in 1984 was 1,256,705 (USACE 1986:69; Morgan 1987:42-47). Despite the harbor's brisk trade, the Naval Air Station has remained the city's most important industry. During the Korean War, the Pensacola station graduated 6,000 aviators. Since WWII, Pensacola has also been the homeport for an aircraft carrier to provide training for the student pilots. From 1962 to the present, the USS *Lexington* (AVT16) has performed this duty (Coletta 1985:472-474).

Description of Findings

In August 2002, archaeologists from PCI conducted remote sensing and terrestrial investigations at Town Point on Deadmans Island for a proposed shoreline protection project (Tuttle and James 2003). The island is archaeologically sensitive with known prehistoric and historic resources. The results of the investigation confirmed a number of those resources and located several anomalies which may represent potentially significant cultural resources. During the remote sensing phase of investigation, researchers identified a total of 17 magnetic anomalies within the project boundaries (Figure 4). Because of the historical nature of the area, all 17 were considered to potentially represent significant cultural resources. However, only four of those anomalies (1, 3, 9 and 13) were determined to lie along the sheetpile alignment and would be directly impacted by construction activities. As a consequence, those four targets were recommended for additional investigation. While the remaining 13 anomalies were outside the sheetpile alignment, each was recommended for avoidance during construction. If avoidance was not a possibility, then additional investigation was recommended.

No significant cultural resources were identified during the terrestrial phase of investigation. However, a number of features were observed exposed on the surface which appeared to be associated with previous historical activity on the island. As activities associated with planting vegetation on the island would serve to protect those resources no additional investigation was recommended.

Diver investigation of anomalies 1, 3, 9 and 13 revealed that all four were generated by modern debris or material possibly associated with the marine railway or fertilizer plant established on Town Point during the late 19th and early 20th centuries. Anomalies 1 and

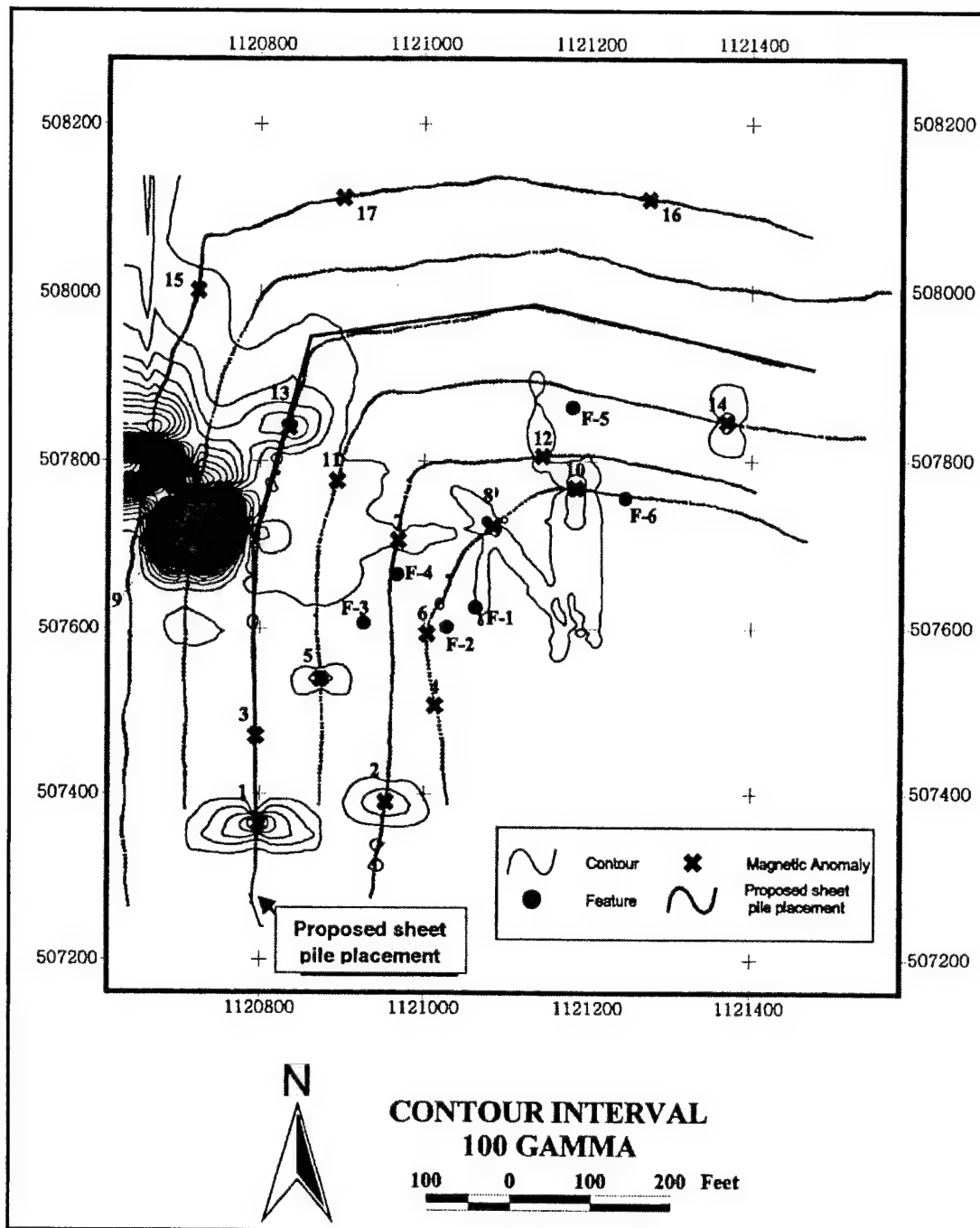


Figure 4. Magnetic contour map, phase I survey of Deadmans Island (Tuttle and James 2003:33).

3 were identified as debris consisting rail road iron, pilings, wire rope and chain. Anomalies 9 and 13 were identified as coils of wire and structural material: dock structures and a barge. Besides the barge, all of the material appeared to be fragmentary. Probing in the vicinity of the anomalies revealed no associated articulated remains. Water depth at the target locations varied between 3 and 6 feet mlw.

Target Designation	Northing	Easting
Anomaly 1	507363	1120797

Anomaly 1 was identified by PCI archaeologists along the proposed sheetpile alignment. The target was detected on only one survey lane. The dipolar signature had a maximum intensity of 1,324 gammas and a length of detection of 75 feet. Water depth in the vicinity of the anomaly was 4 feet.

Cultural material at the site of Anomaly 1 proved to be a combination of railroad rails, wire rope and chain. It is possible that the material was associated with a late 19th century marine railway located on Town Point. Probing to a depth of 10 feet below the material generating the signature confirmed that the debris was not masking potentially significant submerged cultural resources. As material at the site proved to be debris rather than a potentially significant archaeological resource, no additional investigation of the anomaly is recommended.

Target Designation	Northing	Easting
Anomaly 3	507469	1120794

Anomaly 3 was identified by PCI archaeologists along the proposed sheetpile alignment. The target was detected on only one survey lane. The dipolar signature had a maximum intensity of 152 gammas and a length of detection of 55 feet. Water depth in the vicinity of the anomaly was 3 feet.

Cultural material at the site of Anomaly 3 proved to be the remains of a dolphin or dock structure piling with a 48-inch by 8-inch iron strap. It is possible that the material was associated with a late 19th century marine railway or early 20th century fertilizer plant previously located at the site. Probing to a depth of 10 feet below the material generating the signature confirmed that no potentially significant submerged cultural resources lie underneath the piling and strap. Material at the site proved to be debris rather than a potentially significant archaeological resource and no additional investigation of the anomaly is recommended.

Target Designation	Northing	Easting
Anomaly 9	507725	1120714

Anomaly 9 was identified by PCI archaeologists along the proposed sheetpile alignment. The target was detected on three survey lanes. The complex signature had a maximum intensity of 8,713 gammas and a length of detection of 370 feet. Water depth in the vicinity of the anomaly was 3 feet.

Cultural material at the site of Anomaly 9 was identified by probing and proved to be a heavy wood structure that resembles of a dock or heavy flooring. Most of the structure lies under more than 7 feet of bottom sediment. Sediment over the surviving remains

contained a scatter of stones with at least one concentration immediately on top of the structure. The intensity of the magnetic signature was in large part due to coils of heavy wire in the sediment above the structure.

Systematic probing ultimately identified a portion of the structure within 18-inches of the bottom surface. An induction dredge was used to remove sufficient sediment to document a representative example of the structure. The exposed material proved to be heavy timbers in excess of 12-inches in width and varying from 6 to 12-inches in height. The timbers were attached by staggered iron drift pins 1 1/4 inches in diameter and up to 5 feet in length. The fasteners were located on centers that ranged from 9 to 12 inches. Several drift pins were fitted with heavy iron plates and additional rods that extended down into the sediment. Two of the pins were fitted with conical cast iron caps. A 4-inch diameter iron pipe also extended down into the sediment below the exposed structure. The wood was badly damaged by teredo worms and cell structure deterioration.

The exposed structure appears to be part of a modern dock or industrial structure. The location and construction suggest that it is associated with the fertilizer plant located at the site during the early 20th century. As the exposed structural material proved to be modern and proposed plans for erosion control will actually stabilize the site, no additional investigation of the anomaly is recommended in conjunction with the proposed project.

Target Designation	Northing	Easting
Anomaly 13	507840	1120834

Anomaly 13 was identified by PCI archaeologists along the proposed sheetpile alignment. The target was detected on only one survey lane. The complex signature had a maximum intensity of 793 gammas and a length of detection of 209 feet. Water depth in the vicinity of the anomaly was 3 feet.

Cultural material at the site of Anomaly 13 proved to be the remains of a dock structure and barge. The magnetic signature was generated by a combination of iron fasteners, pipes, bollards and a pipe structure associated with the barge. Although the vessel's hull was entirely beneath the bottom surface, probing revealed that the size was approximately 20 by 30 feet.

It is likely that the barge was associated with an early 20th century fertilizer plant located at the site. Probing to a depth of 10 feet outside the vessel structure confirmed that the vessel is not masking other potentially significant submerged cultural resources. As the exposed structural material proved to be modern and proposed plans for erosion control will actually stabilize the site, no additional investigation of the anomaly is recommended in conjunction with the proposed project.

Conclusions and Recommendations

Historical and archaeological research of the Pensacola Bay region confirmed evidence of sustained maritime activity associated with the northwest coast of Florida. Documented transportation activities along that part of the peninsula and neighboring waterways date from the first half of the 16th century. The Pensacola area became a focus for European activities as early as the 1550s when Tristan De Luna y Arellano established a small settlement on Pensacola Bay. The outpost was abandoned shortly after a devastating hurricane in 1559 and the region was neglected until the late-17th century. In 1698, the Spanish reestablished their presence on the bay in an effort to stem French expansion in the Gulf region. However, Pensacola was never a prosperous colony for the Spanish or for the English during their brief occupation after the conclusion of the French and Indian War. It was only after Americans arrived in the second quarter of the 19th century did Pensacola and the bay region begin to realize its full potential as both a commercial and military center.

As a consequence of over 400 years of navigation along the northern Gulf of Mexico and the development of a port at Pensacola starting in the late 17th century the bay area should be considered highly sensitive for submerged cultural resources. Historical research has shown that numerous shipwrecks have been documented in the waters in the bay. Some of these wrecks and other sites which document the industrial development of the bay have been recorded by archaeologist in the vicinity of the current project area (see site files collected by PCI in Tuttle and James 2003:Appendix D).

The results of the investigation revealed that all four anomalies were generated by modern debris or material possibly associated with the marine railway or fertilizer plant established on Town Point during the late 19th and early 20th centuries. Anomalies 1 and 3 were identified as debris consisting rail road iron, pilings, wire rope and chain. Anomalies 9 and 13 were identified as coils of wire and structural material: dock structures and a barge. Besides the barge, all of the material appeared to be fragmentary and retained little of their original fabric. Probing in the vicinity of the targets also revealed no associated articulated remains. No further investigation of the anomalies is recommended in conjunction with the current project.

The results of this investigation, as well as, the results of previous investigations conducted by PCI (Tuttle and James 2003), the Florida Bureau of Archaeological Research (Franklin, Morris and Smith 1991) and the University of West Florida (Joy 1988) have identified several types of cultural resources on and in the waters offshore of Deadmans Island. These resources include industrial, shipwreck, colonial and aboriginal sites. The categories of artifacts expected from these sites are wide ranging and many forms are common to a number of the identified resource types. Artifacts that might be uncovered during construction activity in the vicinity of Deadmans Island include:

Industrial sites	Shipwreck sites	Colonial sites	Aboriginal sites
Brick	Hull structure	Ceramics	Pottery
Timber	Hardware/machinery	Bottles	Bone
Machinery components	Ballast	Glass	Shell
Iron rails	Anchors	Tobacco Pipes	Projectile Points
Fasteners	Canon & ordnance	Personal items	Organic material
Cable	Fasteners	Bone	
Pipes	Rigging	Shell	
Rope (wire & fiber)	Organic material	Nails	
Misc. iron	Rope (wire & fiber)	Shipwrecks	
Coal	Cable	Ballast	
Ceramics	Brick	Military items	
Bottles	Coal	Organic material	
Glass	Ceramics		
Personal items	Bottles		
Shipwrecks	Glass		
Dock structures	Personal items		
Organic material	Military items		

The USACE has a standard "Stop Work" clause should any cultural material be uncovered during construction activities (Gibbens 2004). All work activity should cease and the contractor notify USACE Mobile. An archaeologist should also be consulted to assess the potential significance of the material discovered during construction. Assessment should be designed to identify the type of cultural material and provide a reliable dating context. In addition to identification and dating, efforts should be made to establish and assess the nature and significance of the associated archaeological record. Attention should be paid to on-site preservation, disturbance of the site, environmental conditions and research potential. Research should be designed to collect sufficient data to support a preliminary assessment of National Register of Historic Places eligibility. Recommendations should include options for avoidance and suggestions on the potentials for additional investigation.

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Appendix A

**Division of Archaeological Resources
1A-32 Archaeological Research Permit Number 0304.01**



FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

July 11, 2003

Dr. Gordon P. Watts, Jr., Ph.D.
Tidewater Atlantic Research
PO Box 2494
Washington, North Carolina 27889

Re: 1A-32 Archaeological Research Permit Number 0304.01
Deadman's Island Target Assessment

Dear Dr. Watts,

The application, which you submitted on behalf of Tidewater Atlantic Research, for an archaeological research permit under Chapter 1A-32 of the Rules of the Department of State, was received by the Division of Historical Resources, Bureau of Archaeological Research (BAR) on July 11, 2003. We have reviewed the information contained in your application and find it to be complete and sufficient.

You are hereby granted a permit to conduct the proposed archaeological field investigations between July 22, 2003 and September 15, 2003 subject to the following stipulations:

- (1) As the Principal Investigator, you shall be responsible for the direction of all archaeological investigations and for the preparation of the final written report on the results of the permitted research. The Principal Investigator or another professional archaeologist must be on site during all fieldwork.
- (2) A copy of this permit shall be provided to the land managing agency and another copy shall be carried by field personnel during field work.
- (3) The effective field investigation dates are also subject to receipt of permission from the land management agency and, in some instances, the State/Federal dredge-and-fill permitting program. Those agencies may also require work performance conditions relevant to their natural resource management and permitting responsibilities. A copy of the written permission of the

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<input type="checkbox"/> Director's Office	<input type="checkbox"/> Archaeological Research	<input type="checkbox"/> Historic Preservation	<input type="checkbox"/> Historical Museums
(850) 245-6300 • FAX: 245-6435	(850) 245-6444 • FAX: 245-6436	(850) 245-6333 • FAX: 245-6437	(850) 245-6400 • FAX: 245-6433
<input type="checkbox"/> Palm Beach Regional Office	<input type="checkbox"/> St. Augustine Regional Office	<input type="checkbox"/> Tampa Regional Office	
(561) 279-1475 • FAX: 279-1476	(904) 825-5045 • FAX: 825-5044	(813) 272-3843 • FAX: 272-2340	

Gordon P. Watts, Jr., Ph.D.

July 11, 2003

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management agency and, when appropriate, the dredge and fill permitting agency/agencies to conduct the subject work shall be provided to the BAR.

(4) Unless approved in writing by this office, no work beyond that described in and attached to your application, and approved in this permit, shall be performed. This permit, however, is valid for up to one year following the requested report due date. Requests for changes in fieldwork and report/artifact due dates may be made and approved by phone or in writing during this time and do not require amendments to the permit.

(5) All work conducted under this permit must meet the report standards and guidelines required by Rule 1A-46, Florida Administrative Codes.

(6) Archaeological and historical sites encountered during the permitted work must be recorded on the appropriate Florida Master Site File (FMSF) forms and accompany the final report. FMSF Survey Log sheets must accompany each final report submitted as a requirement of this permit. Contact the FMSF at (850) 245-6440 for additional information on current forms and

(7) All artifacts and related materials recovered from state-owned lands are the property of the State of Florida, and are hereby loaned to the permit recipient until the completion of the project on October 15, 2003.

(8) The permit recipient agrees to be responsible for the proper curation and conservation of recovered artifacts and other recovered site materials until such time as those artifacts and other site materials are conveyed to the BAR for curation.

(9) The permit recipient further agrees not to remove from a stable site environment artifacts and materials which the permit recipient is unable to properly curate and conserve.

(10) Copies of all notes, maps, photographs, videotapes, and other field records pertaining to research conducted under this permit shall be provided to the BAR following completion of the project.

(11) All artifacts obtained from state-owned or controlled lands shall be accessioned/catalogued in accordance with instructions provided by BAR staff (see attachment). Please call the BAR Conservation and Collections Management Lab at (850) 245-6444 to discuss the manner in which collected artifacts should be bagged and accessioned, as well as to resolve any other collections management issues.

(12) Following completion of the project all artifacts and related materials obtained from state-owned or controlled lands are to be conveyed to the BAR for permanent curation or processing for loan. Loan requests shall be in writing to the BAR and shall include a listing of the items requested for loan. Loan requests also shall include a written commitment from the curation facility to assume responsibility for the loaned materials.

(13) At least one copy of the final written technical report and at least one copy of a popular report describing the results of the permitted research shall be provided to the BAR by October 15, 2003. The format of the popular report shall be mutually agreed to by the applicant and the land management agency. At least one copy of each of these documents must be sent to the Bureau

Gordon P. Watts, Jr., Ph.D.

July 11, 2003

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of Archaeological Research, 1A-32 Permit Program, Division of Historical Resources, 500 South Bronough Street, Tallahassee, Florida 32399-0250, and are in addition to any copies that may be sent to the Division of Historical Resources for other purposes."

(14) In any release of information, including public presentations, media contacts, and the final written report, there shall be acknowledgment that the portion of the project involving state-owned and controlled land was conducted under the terms of an archaeological research permit issued by the Florida Department of State, Division of Historical Resources, Bureau of Archaeological Research.

(15) If unmarked human remains are discovered, the permit recipient shall comply with the provisions of 872.05, Florida Statutes, and, when appropriate, Rule 1A-44, Florida Administrative Code. Specifically, upon discovery of unmarked human remains, all activities that might further affect those remains shall be halted and the remains protected from further disturbance until an appropriate course of action has been determined by the local medical examiner or by the State Archaeologist, as appropriate.

(16) In issuing this permit, the State assumes no liability for the acts, omissions to act or negligence of the permit recipient, its agents, servants or employees; nor shall the permit recipient exclude liability for its own acts, omissions to act or negligence to the State.

(17) The permit recipient agrees to assume all responsibility for, indemnify, defend and hold the Division of Historical Resources harmless from and against any and all claims, demands, liabilities, or suits of any nature whatsoever arising out of, because of, or due to any act or occurrence of omission or commission arising out of the permit recipient's operations pursuant to this permit and shall investigate all claims at its own expense. In addition, the permit recipient hereby agrees to be responsible for any injury or property damage resulting from any activities conducted by the permit recipient.

(18) The parties hereto agree that the permit recipient, its officers, agents and employees, in performance of this permit, shall act in the capacity of an independent contractor and not as an officer, employee or agent of the State.

If you have any questions about the permit process or about the requirements, please Brenda Swann, Archaeology Supervisor, or contact her by e-mail at bswann@dos.state.fl.us. Please refer to the permit number in all such contacts.

Sincerely,



Janet Snyder Matthews, Ph.D.
Director, Division of Historical Resources

Gordon P. Watts, Jr., Ph.D.

July 11, 2003

Permit No. 0304.01, page 4 of 4

Please sign in the space below indicating your acceptance of the terms and conditions of this permit. Please return an executed copy to this agency. This permit will not become effective until an executed copy has been received by the Division of Historical Resources, Bureau of Archaeological Research. Please call to verify receipt before beginning fieldwork.

I understand and accept the terms of this Chapter 1A-32 Archaeological Research Permit.

Gordon P. Watts Jr.
Signature *by Robert Arnold*

7/28/03
Date

enclosure (1)

JSM:bns

xc: file

Appendix B

Scope of Work

STATEMENT OF WORK

IDENTIFICATION AND EVALUATION OF SUBMERGED MAGNETIC ANOMALIES DEADMANS ISLAND SANTA ROSA COUNTY, FLORIDA

I. Synopsis:

1. A technical proposal should be developed and submitted with an accompanying cost estimate for the work items discussed and listed below in this Statement of Work.
2. The Mobile District is proposing to install a shoreline protection system at Deadmans Island, Santa Rosa County, Florida. Due to the archeological sensitivity of the island and surrounding waters, underwater remote sensing and terrestrial surveys were conducted in August 2002. Seventeen magnetic anomalies were recorded within the underwater survey area. Four of the anomalies were determined to be on or immediately adjacent to the proposed shoreline protection structure alignment (Anomalies 1, 3, 9 and 13). The report of the investigations entitled *Underwater Remote Sensing and Terrestrial Survey Pensacola Bay and Deadmans Island Santa Rosa County, Florida* that contains detailed information on the locations and descriptions of the anomalies will be provided under separate cover.

II. Statement of Work:

1. The Contractor shall submit a Diving Safety Plan in accordance with the U.S. Army Corps of Engineers Safety Manual EM 385-1-1 for approval by the Mobile District's Agency Dive Coordinator. Current diving physicals (within the last 12 months) must also be submitted for all divers. The Diving Safety Plan and divers qualifications must be approved **in writing** by the Mobile District Safety Office prior to initiation of field work under this contract. A copy of the Diving Safety Plan will be kept on-site during the field
2. Prior to initiation of field work, the Contractor is responsible for obtaining a State of Florida Archeological Research Permit from the Division of Historical Resources, Bureau of Archeological Research for the work. A copy of the permit must be included in the draft and final reports of these investigations.
3. The Contractor shall furnish the following work and services as set forth below.

- a. The Contractor shall furnish all labor, plant, survey and diving equipment, transportation, laboratory facilities and associated materials, and services necessary to perform underwater archeological investigations described in this Statement of Work.
 - b. The excavation, recording, and diving techniques shall be representative of the state of current knowledge and development. Equipment and methodology to be employed by the Contractor shall be discussed in detail in the Technical Proposal for the Contract.
 - c. Performance of this Contract requires Contractor personnel consisting of the following general categories: Principal Investigator, Underwater Archeologist, Diving Supervisor, Diver, Archeological Assistant, Draftsman, Illustrators, Technical Editors, and other specialized consultants as necessary. Personnel Qualifications are detailed in Paragraph 6. below.
4. The types of tasks and services to be performed under the terms of this Contract shall include but are not limited to the following:
- a. Underwater Survey - Reestablishing the location and delineation of magnetic targets.
 - b. Diving, Underwater Excavation, Mapping and Underwater Photography - To expose and record the identity of the magnetic targets. All diving conducted under this Contract shall be conducted in accordance with the U.S. Army Corps of Engineers Safety and Health Requirement Manual EM 385-1-1 and the U.S. Navy Diving Manual, Volumes I and II. Where a difference in standards exist, the more stringent applies. Diving requiring decompression shall not be conducted under this Contract. The Contractor must furnish copies of Certifications of Divers Insurance as part of the proposal for this Contract.
 - c. All excavation units will be backfilled to normal bottom contours upon completion of the excavations.
 - d. Stabilization and Analysis - Artifacts, if recovered from the underwater excavations, shall be cleaned, stabilized through appropriate chemical and mechanical processes, and analyzed to ascertain potential historic significance.
 - e. All records, cultural materials and other data generated under this contract will be permanently curated at the Office of Archeological Research, the University of Alabama, Moundville, Alabama.
 - f. Preparation of Reports - Progress Reports, Management Summary, Draft and Final Reports are required. Format, contents, and schedules for submission of these documents are detailed in the Submission/Reports section of the Statement of Work.

III. SPECIFIC REQUIREMENTS:

1. Under this Contract, submerged historic properties investigations shall be conducted at Deadmans Island, Santa Rosa County, Florida. Water depth in the area varies from three to nine feet. Bottom sediments are sand.

2. Work and services to be performed under this Contract are described below.

(a) Underwater investigations shall be conducted to document the identity and overall dimensions of the 4 targets. Equipment, personnel, and methodology to be employed in this task must be clearly discussed in detail in the Technical Proposal. Time frame for completing this task must also be detailed in the Technical Proposal. Cost estimates shall be submitted separately.

(b) Artifacts, if recovered, from the underwater excavations shall be analyzed, catalogued, stabilized and curated. The Technical Proposal must contain a discussion of the proposed methods of stabilization, analysis, and curation facilities to be utilized. Schedules to complete the conservation of the various classes of artifacts must be included in the proposal.

(c) All excavations will be back-filled to original bottom contours upon completion of the underwater excavations.

(d) As a result of the underwater investigations and archival research the Contractor shall prepare a management summary and technical report. At a minimum, this information shall include age and type of resource represented, previous and present ownership (if available), present and original appearance, condition, and detailed statement of significance.

IV. PERSONNEL QUALIFICATIONS:

1. Principal Investigator for the Contract shall be at the minimum an archeologist or historian at the M.A. level with at least two (2) years of professional experience in historic properties management and the administration of multi-disciplinary historic properties surveys. He/she will be responsible for overall supervision of work and services to be performed under this Contract, and will be responsible for the validity of the material presented and reports produced under this Contract. The Principal Investigator shall sign the report(s). In the event of controversy or court challenge, the Principal Investigator may be placed under separate Contract and called upon to testify on the behalf of the Government in support of his findings.

2. Qualifications of the Principal Investigator and main supervisory personnel in support of their academic and experiential qualifications for the project must be submitted to the Contracting Officer by the Contractor as part of the proposal. Any change of these employees during the performance of this Contract must have the prior written approval of the Contracting Officer.

3. Historian - The minimum formal qualifications for individuals practicing history as a professional are a graduate degree in history or closely related field; or a bachelors degree in history or closely related field plus one of the following:

(a) At least two years of full-time experience in research, writing, teaching, interpretation, or other demonstrable professional activity with an academic institution, historic organization or agency, museum, or other professional institution; or

(2) Substantial contribution through research and publication to the body of scholarly knowledge in the field of history.

4. Archeologist - The minimum formal qualifications for individuals practicing archeology as a profession are as follows:

(a) A graduate degree in archeology, anthropology, or a closely related field or equivalent training.

(b) A demonstrated ability to carry research to completion.

(c) At least sixteen (16) months of professional experience and/or specialized training in archeological field, laboratory, or library research, administration, or management, including at least four (4) months experience in archeological field research, and at least one (1) year of experience and/or specialized training in the kind of activities the individual proposes to practice. (Refer to Appendix C, 36 CFR Part 66, published in the Federal Register, Vol. 42, No. 19 - Friday, 28 January 1977, for additional information.

5. Underwater/Marine Survey Archeologist - In addition to meeting the formal qualifications for an archeologist defined above, the underwater archeologist will also have demonstrated background of coastal geomorphology and geology, familiarity with remote sensing devices such as shallow seismic profilers, marine survey magnetometers, side scan sonar, and electronic positioning systems and the ability to interpret the output of these devices. He/she will have at least one (1) year of supervised experience in marine survey archeology, including extensive offshore training in the operation of remote sensing devices and the preparation of reports, together with at least six months in a supervisory capacity on underwater and marine survey projects. The underwater archeologist must have demonstrated knowledge and at least six months experience in the methods, techniques, and use of equipment required for underwater site evaluation and data recovery at submerged shipwreck and/or archeological sites. The underwater archeologist must also meet the qualifications for Diver described below.

6. Diver - All diving will be conducted in accordance with EM385-1-1, Occupational and Safety and Health Standards 29 CFR 1910 and the U.S. Navy Diving Manuals, Volumes I and II. Qualifications for the various classes of divers are included in these documents.

7. Archeological Assistant - Personnel hired for this position should have a B.A. or B.S. degree in archeology, anthropology, or a closely related field. In addition, the archeological assistant should have at least three (3) months experience in field methods and laboratory analysis under the direction of a qualified underwater archeologist as defined above.

8. Consultants - Personnel hired or subcontracted for their special knowledge and expertise must possess academic and experiential qualifications in their own fields of competence. For example, a historian hired for this Contract should have demonstrated experience in maritime history, historic archeology, and naval architecture, in addition to a graduate degree in history from an accredited college or university. If consultants have not been retained at the time of Contract negotiations, qualifications may be omitted until such time as they are identified, subject to written approval of the Contracting Officer.

V. CORRECTION OF UNSATISFACTORY WORK:

If work is found to be in error, incomplete, illegal, or unsatisfactory after assignment is completed, the Contractor will be liable for all costs in connection with correcting such errors. Corrective work may be performed by Government forces or Contractor forces at the discretion of the Contracting Officer. In any event, the Contractor will be held responsible for all costs required for correction of such errors, including salaries, automotive expenses, equipment rental, supervision, and any other costs in connection therewith.

VI. COMPLIANCE WITH APPLICABLE LAWS:

The Contractor shall be responsible that his employees strictly observe the laws of the United States or other governing body affecting all operations at the site under the Contract. The Contractor shall comply with all applicable laws under which he is operating including those concerning the inspection of equipment.

VII. DELIVERIES:

All costs of deliveries shall be borne by the Contractor. Each delivery shall be addressed to: Contracting Officer, or other address as requested, and shall be accompanied by a letter or shipping form in duplicate, listing the materials being transmitted, and being properly numbered, dated and signed. In some instances it will be required that the Contract Manager be furnished some documentation simultaneously. Mobile District Technical Point of Contract for this Contract is Ms Dottie Gibbens, 334- 694-4114, E-Mail: dorothy.h.gibbens@sam.usace.army.mil

VIII. SUBMISSIONS/REPORTS:

1. Promptly after execution of this Contract, the Contractor shall submit to the Contracting Officer for approval, a schedule showing the order in which the Contractor proposes to carry out the work and the contemplated dates on which he will start the several salient features of the project and the contemplated dates for completing same. Such schedule shall provide for completion of all work required within the Contract time. The Contractor shall correct the progress schedule on the fifth day of each month and immediately deliver three copies to the Contracting Officer. Each progress schedule shall be accompanied by a narrative describing the work completed during the previous month.

2. The Contractor shall submit within seven (7) calendar days after a conference or discussion, either telephonic or personal, a written record for the meeting and/or discussion and furnish two copies to the Contracting Officer. The written record shall include subject, names of participants,

outline of discussion, and recommendations or conclusions. Each written record shall be numbered in consecutive order.

3. Within ten (10) calendar days of completion of the field investigations, the Contractor shall submit three (3) copies of a Management Summary which briefly and concisely summarizes the results of the investigations.

4. The technical report will contain the following elements: an abstract, introduction, detailed discussions of the results of the field investigations, bibliography and appendices. Five (5) copies of the draft report are to be submitted.

(a) The abstract shall be a synopsis of the report containing the general conclusions and recommendations of the study and be suitable for publication in an abstracts journal.

(b) The introduction shall include, but is not limited to, the following: source of funding, purpose of the study, delineation of the study area, personnel involved in the study, and any problems encountered in conducting the study.

(c) The study area will be placed in its regional setting, with specific attention given to previous historic properties investigations in the study area.

(d) A major component of the report shall be a discussion of how the underwater investigations were conducted and the results of these investigations. The report will include the results of the underwater survey conducted in May 2000 as well as the results of the target identification phase of the project.

(e) The draft and final reports shall be authorized and signed by the Principal Investigator. In addition, the reports shall address the following format:

(1) Text material shall be typed on good quality bond paper, 8-1/2 inches by 11 inches with a 1-1/2 inch binding margin on the left side, 1-inch on the right, and

1-inch at the top and 1-inch at the bottom, using a type style such as 12-point type and with double line spacing for the draft report and single line spacing in the final report. No logos will appear on the text, drawings, plates, etc.

(2) Drawings or plates in the technical report will normally not be larger than 8 1/2 inches by 11 inches with sufficient margin for binding on the left side and shall include a graphical scale. If advantageous to use plates larger than 8 1/2 inches by 11 inches and where photographic reduction or folding to 8-1/2 inches by 11 inches is not practical, the larger plates should be submitted in a separate folio, suitably identified.

(3) A copy of the Statement of Work/Specifications for this Contract will be appended to the draft report only.

(4) The cover and title page of the report must bear an appropriate inscription indicating the source of funds, the title number of the Contract, the contracting party, the author and Principal Investigator's name, if different.

(5) All references cited and/or utilized shall be listed in standard American Antiquity format. Contacts with individuals shall be cited as well. For U.S. Government funded contract reports, the reference shall note that the report was submitted to the funding agency by the preparer.

(6) Information shall be presented in textual, tabular, and graphic forms, whichever is most appropriate, effective, and advantageous to communicate necessary information.

(7) All tables shall have a number, title, appropriate explanatory notes and a source note.

(f) Black and white photographs are preferred except when color changes are important for understanding the data being presented. No Polaroid or instant type photographs may be used. Plates appearing in the report must be good quality, clear reproductions made by half-tone or equal quality process. Xerox plates are not acceptable.

(g) A completed Florida Master Site File Survey Log Sheet will be placed unbound in each copy of the draft report.

5. Five (5) copies of the draft report shall be submitted to the Contracting Officer for review by the Contracting Officer and interested State and Federal agencies. Review and coordination shall be completed and comments furnished to the Contractor within sixty (60) calendar days after receipt of the draft report. Should the Government exceed the stated review time, a corresponding extension will be granted to the Contractor. Subsequent drafts may be required based on the comments of reviewers at no additional cost to the Government. Professional editing of the draft and final reports is a mandatory task.

6. Fifteen (15) copies of the final report, incorporating the reviewer's comments, shall be submitted (along with a reproducible master copy of the original text, drawings, and plates) to the Contracting Officer within forty-five (45) calendar days after the return of the draft report and review comments. Perfect binding of the final reports with spine printing is mandatory.

(a) One (1) copy of the report text, drawings, and plates on disk shall be submitted with the final report in the most recent version of Microsoft Word..

(b) Acceptance of the final report is contingent upon written approval by the Government.

7. Neither the Contractor nor his representative shall release or publish any sketch, photograph, report, or other materials of any nature obtained or prepared under this Contract without specific written approval of the Contracting Officer, prior to the final acceptance of the report by the Government.

8. A listing of records, catalog of artifacts, and other materials assembled during this Contract will be submitted as a separate document for review and approval at the same time as the draft report.

9. The report, through the Contracting Officer, will be maintained on microfiche by the National Technical Information Service (NTIS) and will be available to interested persons from NTIS. Each report will include Form DD 1473 (provided to the Contractor by the Contracting Officer) as its first page. Blocks 4, 5, 7, 8, 9, 11, 12, 13, 15, 16, 17, 19, and 20 of Form DD 1473 will be completed by the Contractor. Specific locations of sites found or otherwise identified as the result of the investigations under this Contract that might be subject to vandalism will be submitted by the Contractor as a separate document apart from but with the final report and marked "Not for submission to NTIS".

VIII. CONFERENCE AND MEETINGS

There will be two categories of meetings between Contractor and Contracting Officer: (1) scheduled formal conferences to review Contractor submissions, and (2) informal, unscheduled meetings for clarification, assistance, coordination and discussion.

1. Category (1) meetings will be scheduled by the Contracting Officer and will be held at a location to be chosen by the Contracting Officer. This may be on the project sites, but generally will be at the Mobile District. Category 1 meetings will be scheduled at least every ninety (90) days after initiation of the Contract and shall equal the number of quarter years the Contract is in force.

2. Category (2) meetings, if needed, may be called on short notice by the Contractor or Contracting Officer as needed during the course of the Contract for coordination, and the time and place scheduled as conveniently as possible for both.

3. Both category (1) and (2) meetings are considered a part of the Contract and no extra payment will be made for attendance. The number of category (1) meetings shall not exceed a maximum of three. Category (2) meetings will be held within the vicinity of the project area.

IX. SCHEDULE OF SUBMISSIONS: The following times and requirements are established for submitting the various products that are mentioned above. Times are calendar days from effective date of the contract Contract.

- a. Submit three (3) copies of the Management Summary: Ten (10) calendar days of completion of the field investigations.
- b. Submit five (5) copies of the draft report and other required items: forty-five (45) calendar days. Mobile District will provide comments on the draft: One hundred and fifteen (115) calendar days.
- c. Submit ten (10) copies of the final report and other required items: one hundred sixty-five (165) calendar days.

14. PAYMENT SCHEDULE: This Contract is Firm-Fixed Price. The following payments will be made as reflected in the Contractor's completion of tasks.

65%- Upon completion of field investigations

75% - Upon submission of the draft report

85% - Upon notice to print the final report

100% - Upon written acceptance of the final report.

Appendix C

**Comments on Draft Report
U.S. Army Corps of Engineers, Mobile District
&
Florida Division of Historic Resources**



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, AL 36628-0001

March 18, 2004

Inland Environment Team
Planning and Environmental Division

Dr. Gordon P. Watts
Tidewater Atlantic Research, Incorporated
Post Office Box 2494
Washington, North Carolina 27889

Dear Dr. Watts:

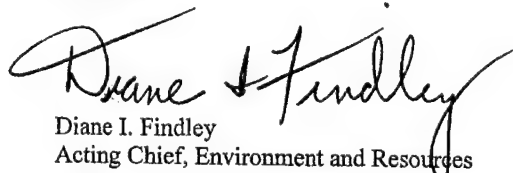
This letter is in reference to U.S. Army Corps of Engineers, Mobile District Contract DACW01-03-T-0048 with your firm for *Identification and Evaluation of Submerged Magnetic Anomalies Deadmans Island, Santa Rosa County, Florida*.

The review of the draft report submitted in partial fulfillment of the requirements of this task order has been completed and the report is accepted. In accordance with the Statement of Work for this task order, please submit 25 copies of the final report. A disk copy of the final report in the most recent version of Microsoft Word and an unbound master copy of the original text, drawings, and plates are to be submitted with the final reports.

Please place the Mobile District report number COESAM/PDEI-04-002 on the upper left hand corner of the cover and title page of the final report. Place a completed Standard Form 298 (enclosed) between the cover and title page of each copy of the final report. The enclosed comments from the Florida State Historic Preservation Officer are to be addressed in preparing the final report. A copy of this letter will be included in the final reports as an appendix.

Mobile District requests that the reports be submitted within 45 days of your receipt of this letter. Should you have questions or require additional information, please contact Mobile District archeologist, Ms. Dottie Gibbens at 251-694-4114.

Sincerely,


Diane I. Findley
Acting Chief, Environment and Resources
Branch

Enclosures



FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Hugh A. McCellan
Department of the Army
Mobile District, Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628-0001

October 27, 2003

Re: DHR No. 2003-9216 (2003-9135, 2002-10409-B) Received by DHR: October 20, 2003 *sent 10/29/03*
Identification and Evaluation of Submerged Magnetic Anomalies: Deadmans Island
Santa Rosa County, Florida

Dear Mr. McCellan:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992, and 36 C.F.R., Part 800: *Protection of Historic Properties*. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties listed or eligible for listing in the *National Register of Historic Places*, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Additional investigation conducted to assess the four magnetic anomalies identified in a previous survey, included a systematic search of the bottom surface either by wading or diving with a hydraulic jet probe and / or induction dredge.

Results of the investigation revealed that all four anomalies were generated by modern debris or material possibly associated with the marine railway or fertilizer plant established in the late 19th and early 20th centuries. It is the opinion of Tidewater Atlantic Research, Inc. (TAR) that no further investigation of the anomalies is warranted. Based on the information provided, our office concurs with this determination.

We further recommend that the 13 other anomalies that were identified by Panamerican Consultants, Inc., should be avoided during all proposed activities. This office emphasizes that the subject area and its vicinities are considered culturally and historically significant and hence we recommend that TAR should provide the Army Corps of Engineers with informational material that may be given to the project crew explaining the kinds of archaeological materials that might be found during the proposed activity, and the steps that should be taken in the event that such material is encountered. Should you require further information with regards to protecting cultural resources in the proposed project area, we suggest that the following persons be contacted:

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

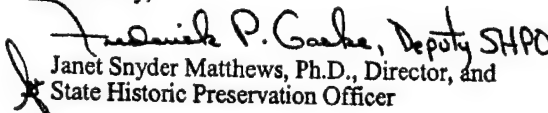
<input type="checkbox"/> Director's Office (850) 245-6300 • FAX: 245-6435	<input type="checkbox"/> Archaeological Research (850) 245-6444 • FAX: 245-6436	<input type="checkbox"/> Historic Preservation (850) 245-6333 • FAX: 245-6437	<input type="checkbox"/> Historical Museums (850) 245-6400 • FAX: 245-6433
<input type="checkbox"/> Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476	<input type="checkbox"/> St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044	<input type="checkbox"/> Tampa Regional Office (813) 272-3843 • FAX: 272-2340	

Mr. McCellan
October 27, 2003
Page 2

- Dr. Roger Smith, State Underwater Archaeologist at 850-245-6444
- Dr. John Bratten, University of West Florida Archaeology Institute at 850-474-2706.

We find the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*. If you have any questions concerning our comments, please contact Mini Sharma, Historic Sites Specialist, at mtsharma@dos.state.fl.us or (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

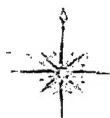
Sincerely,


Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

Xc: University of West Florida Archaeology Institute

Appendix D

Florida Master Site File Survey Log Sheet

Ent D (FMSF
(FMSF only)only) / / **Survey Log Sheet**

Survey #

Florida Master Site File
Version 2.0 9/97Consult *Guide to the Survey Log Sheet* for detailed instructions.**Identification and Bibliographic Information**Survey Project (Name and project phase) Anomaly identification and Assessment, Deadmans Island, Florida, Phase IReport Title (exactly as on title page) Identification and Evaluation of Submerged Magnetic Anomalies Deadmans Island, Santa Rosa County, FloridaReport Author(s) (as on title page— individual or corporate; last names first) Watts, GordonPublication Date (year) 2004 Total Number of Pages in Report (Count text, figures, tables, not site forms) 56Publication Information (If relevant, series and no. in series, publisher, and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*: see *Guide to the Survey Log Sheet*.)Supervisor(s) of Fieldwork (whether or not the same as author[s]; last name first) Watts, Gordon P.Affiliation of Fieldworkers (organization, city) Tidewater Atlantic Research, Inc.Key Words/Phrases (Don't use the county, or common words like *archaeology*, *structure*, *survey*, *architecture*. Put the most important first. Limit each word or phrase to 25 characters.) Deadmans Island, Town Point, anomaly

Survey Sponsors (corporation, government unit, or person who is directly paying for fieldwork)

Name U. S. Army Corps of Engineers, Mobile DistrictAddress/Phone P.O. Box 2288, Mobile, AL 36628 (334) 694-4114Recorder of Log Sheet Ray Tubby

Date Log Sheet Completed

10/10/03Is this survey or project a continuation of a previous project? ☐ No ☒ Yes: Previous survey #(s) [FMSF only]**Mapping**Counties (List each one in which field survey was done - do not abbreviate; use supplement sheet if necessary) DuvalUSGS 1:24,000 Map(s) : Map Name/Date of Latest Revision (use supplement sheet if necessary) Gulf Breeze, FLA / 1969 revised 1987 & 1992**Description of Survey Area**Dates for Fieldwork: Start 08/23/03 End 08/24/03 Total Area Surveyed (fill in one) _____ hectares _____ acres

Number of Distinct Tracts or Areas Surveyed _____

If Corridor (fill in one for each): Width _____ meters _____ feet Length _____ kilometers _____ miles

Research and Field Methods

HR6E06610-07 Florida Master Site File, Division of Historical Resources, Gray Building, 500 South Bronough Street, Tallahassee, Florida 32399-0250

Phone 904-487-2299, Suncom 277-2299, FAX 904-921-0372, Email fmsfile@mail.dos.state.fl.us, Web http://www.dos.state.fl.us/dhr/fmsf/

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Types of Survey (check all that apply): ☒ archaeological ☐ architectural ☒ historical/archival ☒ underwater ☐ other: _____

Preliminary Methods (Check as many as apply to the project as a whole. If needed write others at bottom).

- ☐ Florida Archives (Gray Building) ☒ library research- *local public* ☐ local property or tax records ☐ windshield
☐ Florida Photo Archives (Gray Building) ☒ library-special collection - *nonlocal* ☒ newspaper files ☐ aerial photography
☐ FMSF site property search ☐ Public Lands Survey (maps at DEP) ☐ literature search
☐ FMSF survey search ☐ local informant(s) ☐ Sanborn Insurance maps
☐ other (describe): _____

Archaeological Methods (Describe the proportion of properties at which method was used by writing in the corresponding letter. Blanks are interpreted as "None.")

F(-ew: 0-20%), S(-ome: 20-50%); M(-ost: 50-90%); or A(-ll, Nearly all: 90-100%). If needed write others at bottom.

☐ Check here if NO archaeological methods were used.

- ☐ surface collection, controlled ☐ other screen shovel test (size: _____) ☐ block excavation (at least 2x2 M)
☐ surface collection, uncontrolled ☐ water screen (finest size: _____) ☐ soil resistivity
☐ shovel test-1/4" screen ☐ posthole tests ☒ magnetometer
☐ shovel test-1/8" screen ☐ auger (size: _____) ☐ side scan sonar
☐ shovel test 1/16" screen ☐ coring ☐ unknown
☐ shovel test-unscreened ☐ test excavation (at least 1x2 M)
☒ other (describe): diving/wading, dredging, water jet probe

Historical/Architectural Methods (Describe the proportion of properties at which method was used by writing in the corresponding letter. Blanks are interpreted as "None.")

F(-ew: 0-20%), S(-ome: 20-50%); M(-ost: 50-90%); or A(-ll, Nearly all: 90-100%). If needed write others at bottom.

☒ Check here if NO historical/architectural methods were used.

- ☐ building permits ☐ demolition permits ☐ neighbor interview ☐ subdivision maps
☐ commercial permits ☐ exposed ground inspected ☐ occupant interview ☐ tax records
☐ interior documentation ☐ local property records ☐ occupation permits ☐ unknown
☐ other (describe): _____

Scope/Intensity/Procedures _____

Survey Results (cultural resources recorded)

Site Significance Evaluated? ☐ Yes ☒ No If Yes, circle NR-eligible/significant site numbers below

Site Counts: Previously Recorded Sites _____ Newly Recorded Sites _____

Previously Recorded Site #'s (List site #'s without "8." Attach supplementary pages if necessary) _____

Newly Recorded Site #'s (Are you sure all are originals and not updates? Identify methods used to check for updates, researched the FMSF records. List site #'s without "8." Attach supplementary pages if necessary.) _____

Site Form Used: ☐ SmartForm ☐ FMSF Paper Form ☐ Approved Custom Form: Attach copies of written approval from FMSF Supervisor.

DO NOT USE		SITE FILE USE ONLY	DO NOT USE	
BAR Related			BHP Related	
<input type="checkbox"/> 872	<input type="checkbox"/> 1A32		<input type="checkbox"/> State Historic Preservation Grant	
<input type="checkbox"/> CARL	<input type="checkbox"/> UW		<input type="checkbox"/> Compliance Review: CRAT # _____	

ATTACH PLOT OF SURVEY AREA ON PHOTOCOPIES OF USGS 1:24,000 MAP(S)

